





## EUROPEAN NEWS

## OECD Ministers lay ground for summit in Bonn

BY ROBERT MAUTHNER

PARIS, June 13.

THE FOREIGN and Finance Ministers of the 24-nation OECD Ministers' Conference met here today to lay the ground for a summit in Bonn next month.

Through high officials from the member countries failed to agree at the end of last month on detailed proposals specifying the amount of stimulus to domestic demand required in six leading Western economies, the principle of differentiated action has been generally approved.

Thus, it is widely accepted that the stronger economies, such as West Germany and Japan, would have to give a bigger stimulus to their economies than the so-called "convalescent" countries, like the UK, France and Italy, in order to achieve the OECD growth target of 4.5 per cent by the middle of next year.

So far, the West Germans and Japanese have rejected any attempt to impose precise targets on them and the OECD Government, in particular, has given no indication if and when it is prepared to adopt expansionary measures.

The general assumption here is that the West Germans do not want to give anything away in advance of the Bonn summit, but the OECD secretariat, nevertheless, believes that this week's ministerial meeting will bring some clarification of their intentions.

The need for joint action by the Western economies has been underlined by the Secretariat's latest pessimistic forecasts, which foresee that the area as a whole will grow by no more than 3.5 per cent at the most in 1978.

## Austria payments balance shows sharp improvement

BY PAUL LENDVAY

VIENNA, June 13.

THE AUSTRIAN balance of payments showed a striking improvement in January-April, with the deficit on current account falling by Sch 6.1bn (£217m) to Sch 7.3bn, compared to the same period last year.

The so-called basic balance of payments, in balance as against a Sch 11.5bn shortfall in the same period last year.

Excluding the end-of-year swap transactions between the Central Bank and the credit institutes, official foreign exchange reserves on a seasonally-adjusted basis were up by Sch 7.2bn.

The improvement was due to a 13.5 per cent fall in the visible trade deficit to Sch 18.6bn. Surplus on services account was up by Sch 2.8bn to Sch 10.1bn, with foreign exchange intake from tourism up by 14.7 per cent to Sch 17.7bn, and expenditures by Austrians abroad by 7.5 per cent to Sch 7.2bn.

Thus the net intake from tourism was up from Sch 5.7bn in January-April 1977 to Sch 10.5bn during the same period this year.

Austrian bankers are increasingly unhappy about the restrictions on their credit operations abroad.

Dr. Helmut Klaus, director general and chairman of the Board of Genossenschaftliche Zentralbank, the central institute of the Austrian farmers' co-operative, said that the 7 per cent limit placed on expansion of foreign business this year has had an adverse impact not only on the banks as such, but also on their contacts with the international banking community.

The restrictions came into force at the end of January this year, following an almost 40 per cent expansion of the growth of foreign assets held by Austrian banks in 1977.

In the opinion of Dr. Klaus, however, the time has come to ease them and to increase the permissible growth rate in foreign assets to 20 per cent, taking as before the expected repayments this year as a base.

## Greek-Soviet links grow

BY OUR OWN CORRESPONDENT

ATHENS, June 13.

MR. GEORGE RALLIS, the Greek Foreign Minister, is to pay an official visit to the Soviet Union early in September.

The visit, probably between September 3 and 6, will be the first by a Greek Foreign Minister since the Second World War and will climax a series of overtures made by the Soviet Union to Greece in recent months.

While in Moscow, Mr. Rallis will sign consular and trade agreements. Under the consular agreement, a Greek consulate will be opened in Odessa and a Soviet one in Salonika.

Mr. Rallis will have talks with his Soviet counterpart, Mr. Andrei Gromyko, and high-ranking officials of the Soviet Foreign Ministry on bilateral matters, as well as international issues. Mr. Gromyko is expected to return to the visit.

A government official today denied a Greek Press report that Greece had accepted a Soviet proposal to sign a friendship and co-operation agreement based on the principles of the Helsinki declaration.

He said a joint communiqué will be issued at the end of Mr. Rallis' visit which may also touch on political aspects regarding the policies of the two countries on various bilateral and international issues.

## Nine urged to act together over arms

By Richard Evans

STRASBOURG, June 13.

MUCH GREATER collaboration on the production of armaments among the countries of the European Community was urged by Mr. Geoffrey Rippon, leader of the Conservative group, here yesterday, in order to prevent Europe from becoming dominated technologically by the United States.

He argued in favour of a report advocating a Community action programme for the development and production of conventional weapons, so that designs could be standardised over a wide range.

This would give the benefit of large-scale production which the Americans and Russians already possessed, and would allow Europe to develop its own technology, which was now in danger of being stamped out.

Viscount Edmund Davignon, Commissioner for Industrial Affairs, gave a non-committal response to demands for changes in the Community's defence policy, partly because of his determination to avoid offending national susceptibilities.

He stressed that separate states retained their sovereignty over national defence policies. The Parliament will vote today on the resolution calling on the Commission to submit a programme for the development of conventional armaments within the common industrial policy.

Mr. Rippon argued that opposition to a programme of greater collaboration would be a vote for the future serfdom of Europe, but a vote in favour would demonstrate an understanding that military and economic security went hand in hand, and that arms production was an important means of fighting unemployment and increasing growth.

At present, the weapons being wasted on a colossal scale as the countries of the Community duplicated each other's efforts.

## EEC is 'getting to grips' with farm problems

By Our Own Correspondent

STRASBOURG, June 13.

THE RECENT Common Market agreement limiting agricultural price rises to an average of 2 per cent was a clear sign that the Community was getting to grips with the problem of market imbalance, according to Mr. Finn Olav Gundelach, Commissioner for Agriculture and Fisheries.

He told the European Parliament here that at a difficult time for the economies of the Nine, when inflation was combining with recession, a clear signal had been sent to farmers that they were producing more than consumers could buy.

Such a small price rise clearly indicated agriculture's contribution to anti-inflationary policy and in real terms agriculture prices would decrease this year, nearly everywhere in the Community.

Mr. Gundelach argued that in two respects the price fixing had marked a considerable step forward—the Community had pushed ahead with moderate farm price policy that offered a better chance of bringing markets into balance; and it had also adopted a package of development measures for the less well off regions.

"We must now aim to consolidate and to push ahead on both fronts," he declared.

Two things were clear from the negotiations. The search for an automatic system for the phasing out of monetary compensatory amounts (MCAs) had failed and the Community must try to confine decisions on green rates changes to the annual price decisions.

He argued that if this was not done, the fixing of common prices would be preempted by national decisions as had almost happened this year.

The calculation of MCAs had also proved difficult this year, principally in the pig meat sector and the Commissioner thought it would be necessary to reduce the level of price support in this category.

## Free Democrats plan Hesse poll strategy

BY JONATHAN CARR

BADLY-SHAKEN by recent electoral setbacks, the West German Free Democratic Party (FDP) is facing a provincial congress next weekend whose outcome will have important repercussions nationally.

The FDP in Hesse is meeting to plan strategy for its campaign for the crucial state election on October 8. If it adopts the wrong course it is likely to be forced out of the state parliament in October, the position of the FDP leader, Herr Hans Dietrich Genscher, will be endangered, and the legislative process in the

federal capital, Bonn, may grind to a halt.

Herr Genscher has brought massive pressure to bear on the Hesse party to come out firmly in favour of continuing its coalition with the local Social Democratic Party (SPD). But some influential FDP members are tempted by a coalition offer from the opposition Christian Democrats (CDU) and still others want to leave the whole matter open.

Herr Genscher fears that any move against a renewed SPD-FDP alliance at this stage would alienate voters and reduce FDP support below the 5 per cent needed for representation in Parliament. At the last Hesse elections the FDP gained only 7.4 per cent, the SPD 43.3 per cent and the CDU 47.3 per cent.

The FDP has just been driven out of local parliaments in elections in Lower Saxony and Hamburg. It has interpreted its own failure there as due to an inability to put its own liberal message across clearly enough combined with the rise of new so-called "green parties" or environmentalists which have stolen support away from the main political groups.

Now there is the real threat of another party urging early reforms, allying itself to environmentalists for the Hesse election. An FDP without a clear identification in the eyes of the voters would be the main loser.

If the FDP vanished from the Hesse parliament and the CDU came to power there, the life for the SPD-FDP coalition in Bonn under Chancellor Helmut Schmidt would become desperately hard.

This is because with a Hesse victory the CDU and its Bavarian ally, the Christian Social Union (CSU), would together have a two-thirds majority in the Bundestag, the federal upper house which groups representatives of the states. That would enable the CDU-CSU to block all Government-initiated legislation if it wished.

Even if the FDP comes out in favour of a further alliance with the SPD, it will still have an uphill struggle to gain a clear profile before the election on issues such as tax, environmental policy and the environment. Most observers feel its survival as a parliamentary force in Hesse will be touch and go.

## Holland's deficit worse than expected

By Charles Batchelor

AMSTERDAM, June 13.

HOLLAND'S BUDGET deficit in 1978 will be higher than was originally forecast, Mr. Frans Andriessen, the Finance Minister, has reported. The Government's financing requirement will be Fl 13.6bn (\$6.1bn)—Fl 1bn more than forecast in the Budget proposals announced last September.

This means the deficit will be even more than the 51 per cent of national income expected. The Government's long-term target is to bring it down to 4 per cent.

Part of the difficulty is that the previous government, which drew up the 1978 Budget, took account in its calculations of plans to reduce expenditure which have not yet been implemented. This has meant that the new Government has had less room to introduce new policies within the Budget.

The planned reductions in the areas of personnel costs, social security provisions for civil servants and family allowances.

Spending has been held back as much as possible so as not to undermine the impact of the major programme of spending cuts which the Government hopes to announce later this week, Mr. Andriessen said in a note to Parliament. The proposed cuts, which are expected to reduce spending by around Fl 10bn over three years will take effect from 1979.

The higher than expected deficit has prompted the Finance Minister to cut overall government expenditure to Fl 200bn (\$90m). Both revenue and spending are higher under the latest forecast but spending has risen more quickly. Spending is now estimated at Fl 97.8bn and revenues at Fl 84.2bn. The Budget deficit of Fl 13.6bn produces a funding requirement of Fl 13.6bn.

The provision for monitoring cargoes and flag carriers was included in the general statement from Brussels on action to counter the growing domination of world shipping by "state trading countries." Britain had called for special action against the Eastern bloc and the Soviet Union in particular. This was turned down after protests from France.

Mr. Clinton Davis said he was moderately well satisfied with the outcome, which had gone further than the Government expected. He regarded it as the first of a number of steps the EEC would take to counter the Soviet threat of under-cutting Western shipping prices and expanding Soviet fleets.

Sanctions to be considered by EEC Transport Ministers include the licensing of ship liner services, tax on freight rates, and cargo quotas based on volume and value of trade.

Mr. Clinton Davis said that a decision on EEC ratification of the United Nations code on liner conferences would have to be accepted in its present form. Britain wanted a code which had little impact on trade between EEC Transport Ministers.

Agreement could have been reached this week, but Britain still refused to agree with the developing nations gain a greater share of world trade.

## Agreement on new motorway to connect Hamburg and W. Berlin

BY LESLIE COLTIT

EAST AND West Germany have agreed the construction of a new autobahn link between West Berlin and West Germany, the first to be built since 1945.

The road will connect West Berlin and Hamburg, and it is estimated will cost DM10n. East Germany until now has taken the position that it does not need the road and that therefore the West Germans should pay for the entire project.

The decision to open up negotiations on the details of the motorway to West Berlin was taken at a meeting between East Germany's Communist Party leader and President Erich Honecker, and the West German Permanent Representative in East Berlin, Herr Gunter Gaus.

Although there are three autobahn links between West Berlin and West Germany and one secondary road, all date from before the last war, the new autobahn would provide the quickest trip between West Berlin and West Germany's largest city, Hamburg.

Now the journey is a tortuous 41 hours on a rutted East German transit road that snakes through villages and towns to the West German border.

The shortest autobahn link between West Berlin and West Germany is the 110-mile stretch to Helmstedt. Work is now nearing completion on the renewal of Helmstedt-Berlin autobahn, which is costing West Germany DM400m.

Herr Gaus said after his meeting with the East German leader that both Herr Honecker, and Chancellor Helmut Schmidt would like to confer in person but that they first want the "climate" of their relations to improve.

The three Western allies in Berlin have raised objections to any visit by Chancellor Schmidt to East Berlin, noting that it would mark a final acceptance by West Germany of East Berlin's incorporation into East Germany.

Reuter adds from Flensburg, West Germany: The last stretch of north-south European motorway linking the Mediterranean and the Baltic was officially opened here today by Queen Margrethe of Denmark and West German President Walter Scheel. Motorists can now drive 1,250 miles from Sicily to Apenland in Jutland on an unbroken motorway.

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## Portugal's parliament approves loan move

By Jimmy Burns

LISBON, June 13.

THE Assembly of the Republic, Portugal's Parliament, has given its formal blessing to the Government's latest attempt to raise foreign loans on the Euro-market.

The governmental alliance of Socialists and Christian Democrats (CDU) secured a majority vote last night for a decree law which will allow Portugal to borrow up to \$500m of this year. Of this \$150m has already been negotiated with a group of international banks co-managed by Westdeutsche Landesbank and Commerzbank.

The remaining amount is expected to be released as a jumbo loan by a consortium of leading U.S. banks as a result of recent talks in New York with Dr. Vitor Constancio, the Portuguese Minister of Finance, and representatives of leading Portuguese banks.

The latest borrowing is in addition to the OECD-backed multilateral facility of \$750m already made available as a result of the agreement with the International Monetary Fund (IMF). The new borrowing will be used by the government to restructure the country's foreign debt of \$2.4bn, and to finance Portugal's balance of payments deficit of \$1.5bn.

Lisbon's usually joyous annual holiday in commemoration of St. Anthony, was overshadowed today by a solemn procession through the capital at the funeral of an 18-year-old student killed in a demonstration here last Saturday.

Over 3,000 people walked silently with raised clenched fists.

Portuguese Prime Minister Mario Soares on a visit to Bonn said yesterday his country would open formal negotiations before the end of this year on admission to the European Common Market. Reuter reports from Bonn.

Flms but the rest of the factory is working normally, the Renault spokesman said.

At Renault's Cleon plant, which resumed work yesterday after a nine-day occupation and shut-down, about 15 per cent of the workforce is still on strike but again the rest of the factory was working normally, the Renault spokesman said.

The CGT and CFDT unions have called for strikes of at least two hours today in all 11 Renault factories in France.

Over 200 workers are still factories in France, occupying the press shops at Reuter.

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In another instance, Spain has traditionally had flattered itself on its good relations with Arab countries. But it was the King's nature designed to insulate Spain from the hostility of those who opposed the dictatorship. Arabia in an effort to promote Spanish business with the Middle East.

The King has been equally active in his endorsement of Spain's membership of an enlarged EEC. France and Italy, the two countries likely to cause Spanish entry the most problems, were the first EEC member states he visited.

On all these state occasions the King appears to impress with a calm and realistic appraisal of Spain in its delicate transitional phase. If he is to be faulted, it is on his rather wooden delivery of prepared text speeches, but he makes up for this in his readily discernible pleasure in meeting people.

It has never been publicly admitted, but it is thought that the King feels he should play a very active role as Spain's chief ambassador abroad. For instance, it was said to have been in large part on his initiative that last September he made an extensive tour of South and Central America. This trip was subsequently considered to be an important symbolic gesture designed to eliminate the rather disdainful and paternalistic image of Spain that had built up there.

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## France's lame-duck steel industry appeals for second rescue

BY DAVID CURRY IN PARIS

THE FRENCH STEEL industry is urgently seeking State aid less than 15 months after the Government put together an emergency rescue package to enable it to renew its plant and scale down its workforce.

When that rescue package was worked out, the industry had just struggled through a year which saw its medium and long-term debt match turnover at FF 31bn (about \$3.7bn). The plan envisaged some FF 8.8bn in investment in new plant by 198



## OVERSEAS NEWS

مكتبة الأصل

## S. African economic recovery proving hesitant and uneven

BY QUENTIN PEEL

JOHANNESBURG, June 13.

LATEST INDICATORS of industrial performance in S. Africa suggest that economic recovery, although under way, is proving much more hesitant and uneven than Sen. Owen Horwood, the Minister of Finance, would like.

The best figures so far have come from the motor industry showing real growth over its severe depression of last year. Motor sales in May were 38 per cent up on May, 1977, and the figures for the first five months—86,900 car sales—were 24 per cent up on 64,493 of those months last year.

The metal and engineering industries also report a "continuing pickup," according to the Steel and Engineering Industries Federation (Sefisa), but only in some 50 per cent of the sectors, and then only marginal. The rather less up-to-date figures from the Department of Statistics on overall manufacturing output show, moreover, that there was a real decline between February and March, leaving

volume nearly 3 per cent lower.

Motor industry spokesmen caution that their figures may well not be a reflection of the underlying economic trend, being to some extent the result of cyclical replacements, and also buying ahead of the introduction of the new general sales tax on July 2.

The Sefisa survey is based on members' returns for April and represents one of the most reliable indicators of economic activity. It reports that "the recovery in manufacturing output in a number of sectors... is being sustained."

Those sectors which continued to report recovery both in output and order intake included general engineering, light metal manufacture and the telecommunications and electronics industry. Slow but steady growth was reported by the agricultural equipment sector, automotive component manufacturers, and producers of electrical equipment.



Japanese authorities yesterday claimed they had averted a pollution disaster after stopping millions of gallons of heavy oil pouring into the Pacific Ocean from giant storage tanks cracked by an earthquake. The earthquake, which jolted the Pacific coastline of Japan's densely-populated main island of Honshu on Monday, killed 22 people and injured 556. It was the strongest to hit Japan in 10 years. The picture above shows some of the damage caused.

## Kuwait will press for OPEC oil price rise

By Ihsan Hijazi

BEIRUT, June 13.

KUWAIT will press for higher oil prices at next Saturday's meeting of the Ministerial Council of the Organisation of Petroleum Exporting Countries (OPEC), the country's Oil Minister, Sheikh Ali Khalifa al Sabah, has announced here today in the English-language newsletter, the Middle East Reporter, he said.

The OPEC conference will "definitely discuss oil prices" but he could not predict the outcome. Sheikh Ali predicted that the current world-wide oil glut will recede before the end of this year.

The Minister said there is a good reason for an increase in oil prices. "Our income has deteriorated as a result of the fall in the dollar and the recent strengthening has not compensated us for past losses," he said, and he doubted that the dollar will ever reach previous levels.

"As such I feel we are entitled to a compensation for the falling dollar," the Minister pointed out.

He said that Kuwait's revenue from oil would have been 10-15 per cent higher if it were not for the drop in the dollar rate. Sheikh Ali pointed out that demand for oil on the world market is picking up, "though not as fast as we would love to see it."

He added: "The willingness of various countries to over-produce or to over-supply is diminishing, and I see an approach towards a balance in the near future" between supply and demand. In reply to a question, he said that this could possibly happen before the end of this year.

## China cultural figure dies

By Colina MacDougall

KUO MO-JO, President of the Chinese Academy of Scientists, who died yesterday at the age of 86, had been a leading figure on the Chinese cultural scene for over 60 years, though since 1971 he had withdrawn from public life owing to age and illness. His last major political move was probably his much publicised "self criticism" in April 1966, the first evidence that the cultural revolution, then in its very early stages, was destined to affect even the highest party leadership.

## SOUTHERN LEBANON

## Heavy fighting during handover

BY OUR FOREIGN STAFF

AS ISRAEL yesterday handed over control of the border strip in south Lebanon to Christian militia under the command of Major Saad Haddad, heavy fighting broke out yesterday between rival Christian militias in the town of Eshdeh about 80 miles north-east of Beirut. Among the 40 killed was Mr Tony Franjeh, a deputy and son of the former President Suleiman Franjeh, his wife and two children.

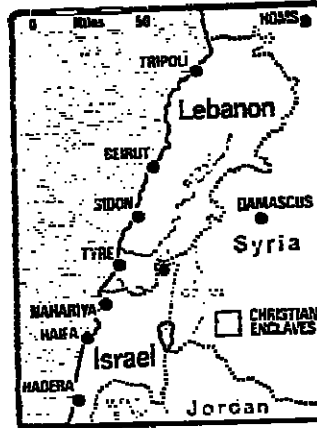
A feeling of an impending national crisis prevailed as President Elias Sarkis summoned the Cabinet to an emergency meeting. The officials were earlier preoccupied with the progress of evacuating Israeli troops from southern Lebanon.

The area which the Christians will be patrolling on behalf of Israel is a strip six miles wide and 55 miles long stretching from the Mediterranean to Mount Hermon. Israel has made this job easier by providing the Christians with military supplies and building a network of roads between the three enclaves, centred on the west round Alma el-Chaab, in the centre around Alt el-Chaab, and in the east around Marjayoun. At the same time, the four main crossing points into Israel at Rosh Haikra on the coast, Dovev and Rneiche in the centre enclave, and near Metulla in the east will stay open.

The Right-wing militia to

whom the evacuated territory was handed over numbers 1,500 men, half of whom are soldiers and officers who belonged to the old Lebanese army which disintegrated during the civil war. The regulars—like Major Haddad—are still officially under the order of the Ministry of Defence, which has instructed him to confine the troops to barracks at the towns of Marjayoun and Qaia five and one miles from the Israeli border. All security duties are to be given to the UN troops pending the arrival of the Lebanese army. Yesterday, the Lebanese Government was reported to have prepared a brigade of 1,500 of its own forces to go to the border area to fill the security vacuum.

Unfil and the Syrian-dominated Arab deterrent force are now facing a crisis if as is probable Major Haddad is determined to start by his mission of patrolling the border as entrusted to him by Israel. The forces on the left—in Lebanon and radical Palestinian groups—have threatened to attack, will not assert itself, it will appear to be tacitly supporting Major Haddad, and this in turn ultimately put strain on its relations with the Palestine Liberation Organisation (PLO), whose leader, Mr Yasser Arafat has agreed to restrain his own forces, and more severe crisis could develop—therefore, outside influence to the Christian militia, Israel has made it quite plain that it will not hesitate to come



to the support of the Christian enclaves if they look threatened. The clashes in the north between rival Christian groups have few direct connections with the issues of southern Lebanon, although there have been reports of Christians in the north going south to help Major Haddad.

Yesterday's fighting began when 800 members of the Right-wing Phalange Party mounted the attack on the town early in the morning and clashed with followers of Mr. Franjeh. They had cut off all the roads and approaches to the town before the attack.

A communiqué by the command of the mainly Syrian Arab deterrent force said that reinforcements from the force were rushed to the scene, that they had reopened the roads and were entering Eshdeh.

Tension between the Phalange Party, which is the largest paramilitary group on the Christian side, and supporters of Mr. Franjeh had been building up since he broke away from the Right-wing coalition known as the "Lebanese Front" and his recognition with former Prime Minister Rashid Karami, a prominent Moslem leader from the Northern Town of Tripoli.

Mr. Franjeh's break with the Lebanese Front was over his U.S. questions did not present a good possibility of a resumption of peace talks, he said the U.S. would consult Israel and Egypt and it is not inconceivable that it would put forward ideas of its own.

## U.S. call on Israeli withdrawal

WASHINGTON, June 13.

A STATE Department official said today it was hard to see how Israel could clear its attitude on withdrawal from occupied territories.

Mr. Harold Saunders, Assistant Secretary of State, told a congressional hearing that the United States hoped negotiations between Israel and Egypt would be resumed after the U.S. received Israeli answers to its questions about the future of two occupied territories, the West Bank and Gaza.

The Israeli Cabinet today deferred its decision on how to reply to the questions. The Cabinet will meet again later this week.

Mr. Menachem Begin, the Israeli Prime Minister, and his supporters are reluctant to commit Israel to withdraw from the two territories, both for security reasons and because they regard them as historically part of Israel.

United Nations Resolution 242, which is endorsed by the U.S., calls on Israel to withdraw from occupied territories in exchange for secure borders.

Asked if the U.S. would put forward its own proposals if the Israeli Cabinet replied to the U.S. questions did not present a good possibility of a resumption of peace talks, he said the U.S. would consult Israel and Egypt and it is not inconceivable that it would put forward ideas of its own.

Reuter

## Syrian troops committed to policing role 'for years'

CAIRO, June 13.

BY ROGER MATTHEWS

THE SUBSTANTIAL withdrawal of Israeli forces from southern Lebanon, the outbreak of fighting today between Right-wing Christian forces north of Beirut, and the sudden spate of warnings about the danger of another Middle East war all serve to focus attention once more on the critical role played by the Syrian army.

From President Hafez Assad downward there is no doubt in Damascus that Syrian troops will remain in Lebanon for years rather than months to come. The Syrians now contribute more than 30,000 men, the bulk of the Arab deterrent force, and the feeling is that this number will have to be stepped up before it begins to diminish.

Senior Syrian officials believe that it is inevitable that its troops have to move further south from their present positions if effective control is to be achieved, thus paving the way for an eventual handover to

Lebanese authority. To this extent, a decision in principle has already been taken to major longer-term political and military problems for President Assad.

During a visit to an armoured brigade headquarters north of Damascus both these aspects rapidly became obvious. The pace and determination of the round-the-clock military training programme, coupled with daily political lectures for all troops, demonstrated the difficulties of the Syrian role in Lebanon when combined with the necessity of offering a credible military option in the overall Middle East conflict.

Flanked by artillery ranges and nesting between surrounding hills, the brigade—which led the original Syrian push into Lebanon—is both absorbing a number of new recruits while re-training and re-equipping longer-serving troops. Three Soviet-made T-82 tanks roared repeatedly down three parallel

tracks, with two minutes 20 seconds allowed to knock out six moving targets and the four-man crew having to change roles after each run.

"Our shooting is very good, and we learned a lot in Lebanon," said the colonel in charge of training. He then turned to watch nearly 100 men pounding past the control bunker, their heads newly shorn and their throats probably raw from the incessant rhythmic chanting of "Hafez, Hafez, Hafez."

The Political Section in Damascus is charged both with the propaganda war against Israel and the domestic explanation of such matters as why it is necessary sometimes to kill Palestinians, of whose cause the regime is a devout supporter, and why men need to serve in Lebanon for long periods separated from wives and families. It also emphasises at length the virtue of the ruling Ba'ath Party, in part to try and bolster

what is a seriously flagging membership.

Mr. Assad is a deeply cautious man, who, having agonised over moving into Lebanon in 1976, is now almost totally committed to remaining there at least for the foreseeable future. Equally, he is committed to a "just" peace with Israel which means that he must be ready to send his armed forces into battle again at, from the Syrian point of view, a moment of his own choosing.

This theme of "consistency" which he likes to promote is of course costly in military terms and perhaps eventually in political terms. It is not a burden that a nation of 7.75m people and about 227,000 can visualise bearing for ever without serious effects on economic growth and more general well-being. Yet the effects of present Syrian policy mean that the armed forces are having to be increased in number and the military budget is growing.

## Are you giving this man an eight hour pay packet for a six hour day?



When you take on a driver you're not buying his time. You're buying the knowledge that your truck and its load is in safe hands. You're buying what's hopefully going to be part of an efficient distribution service. In short you're buying this man's effectiveness in delivering your goods.

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His truck will break down, gulp fuel and maybe spend four hours on what should be a three hour journey.

Any of which will mean you're not getting your money's worth.

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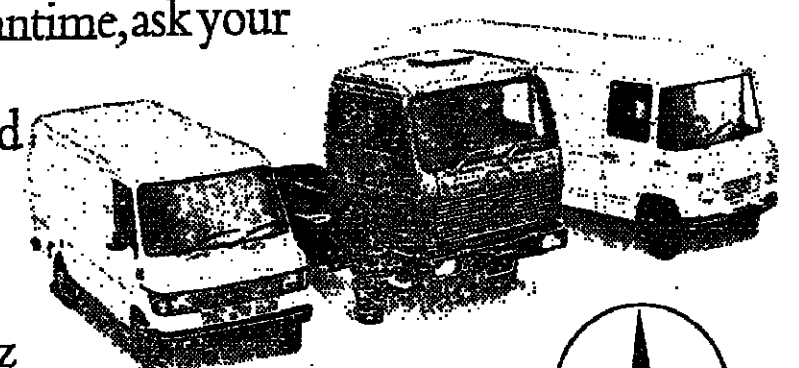
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# Castro blames Brzezinski for 'total lie' over Zaire

BY DAVID BELL

WASHINGTON, June 13.

PRESIDENT FIDEL CASTRO, the Cuban leader, last night publicly denied for the first time that Cuban forces were involved in the Katangan invasion of Zaire and said that U.S. charges to the contrary were based on "lies manufactured by Dr. Zbigniew Brzezinski, Mr. Carter's National Security Adviser."

In an interview with U.S. correspondents in Havana, Dr. Castro said he had already explained privately at great length to the Carter Administration that he had tried to stop the Katangan incursion into Shaba province.

He conceded that, in the past, Cuba had worked with the Katangans who had participated in the final stage of the liberation of Angola in 1975. He added: "Since early 1976 we have tried to avoid relations with the Katangans. We felt that after the war in Angola ended peace to reconstruct itself. It needed to improve its relations with its neighbours."

The Cuban leader said that neither Angola nor Cuba had any moral or legal problems with

helping the Katangese in their fight against the Government of President Mobutu... but both countries made a policy decision not to enter into relations with the Katangese or to co-operate with them.

President Castro said that the Katangese had on numerous occasions requested help but it had not been given. Asked why he had failed to stop the invasion as he said he tried to do, Dr. Castro said that President Agostinho Neto, the Angolan leader, had tried to halt the invasion but had been ill in Moscow just before it took place.

Dr. Castro was careful not to blame President Carter directly for what he described as "not a half-lie but a total absolute and complete lie" about recent Cuban involvement in Zaire. Rather he laid the blame at the door of Dr. Brzezinski saying that he had manufactured the accusation and deceived the President. There were people in Washington, Dr. Castro said, who wanted to create a "Tonkin Gulf" for Africa.

The interview adds one further layer of confusion to the question of Cuban involvement in Zaire. Officials are not clear why

Dr. Castro, who has no love for the Mobutu regime, should be so keen to convince the world that he had no part in a plot that might have overthrown it. There is speculation that he may be trying to drive a wedge into the Carter Administration by singling out Dr. Brzezinski for attack.

The Administration is likely to be embarrassed by the fact that Dr. Castro produced a reply from Mr. Cyrus Vance, the Secretary of State, to a message to the White House sent by a senior U.S. diplomat in Havana. This was disclosed over the weekend. In this Dr. Castro said that he had had no hand in the Shaba affair. In his reply Mr. Vance thanked the Cuban leader for his message.

He said that it was appreciated and that it had been noted. Dr. Castro said that in contrast to what had been emanating from Dr. Brzezinski the reply was "kind and friendly."

Dr. Castro said that he would prepare to meet President Carter to discuss the subject if necessary and added that the President "is a decent and honourable man and I don't want to preclude the possibility that he has been misled."

## Fed replies to Congress warning on interest

By Our Own Correspondent

WASHINGTON, June 13.

MR. WILLIAM MILLER, chairman of the U.S. Federal Reserve Board, has replied to a letter from the chairman of both the House and the Senate Banking Committees. They warned Mr. Miller that the Fed would need congressional approval to pay interest on the system's deposits and that it went ahead without such permission it would precipitate a major clash between the Central Bank and the Congress.

Mr. Miller said that the Fed's right to pay interest was a legal matter and limited that other members of both committees might not agree with the chairman. But he conceded that if they did it would be unlikely for the Fed to pay interest in the face of congressional opposition.

He has been toying with the idea of paying interest on members' deposits as one way of halting the steady decline in membership of the system. Since 1968 some 527 banks have pulled out of the system and that it is not likely to attract new members. He said in his letter that the plan may include some reduction in reserve requirements, the specific pricing of services provided by the Fed and with payment of interest on reserves, and a possible request that Congress pass a law saving that all financial institutions must keep their reserves with the Fed.

## Insurance by foreign banks urged

By David Lascelles

NEW YORK, June 13.

PRESSURE is mounting on the New York branches of foreign banks to insure the deposits they solicit from the public. At present these branches are exempt from federal law which in most cases compels U.S. banks and the subsidiaries of foreign banks to insure deposits with the Federal Deposit Insurance Corporation (FDIC), a Government agency.

According to Miss Muriel Siebert, the state superintendent of banks, there is growing concern about the safety of deposits with these banks. She is acquiring deposits without insuring them, and without the public being aware of this fact. She referred to one bank that was taking full-page advertisements and offering gifts as inducements to depositors, but she refused to name it.

Speaking at a banking symposium yesterday, Miss Siebert said that her department had proposed legislation requiring branches of foreign banks to notify depositors that their money was not insured. She would be stopping legislation pending the passage of a federal bill, known as the International Banking Act, which will require these branches to insure deposits in states which have compulsory insurance laws.

New legislation would affect National Westminster Bank, for example, since it operates a single branch where deposits are not insured. In common with many banks in a similar position, NatWest argues that insurance is unnecessary since the branch does not solicit deposits, and only accepts large deposits from corporate customers which exceed the \$50,000 insurance cover limit.

By contrast, Barclays, which owns a subsidiary here, Barclays of New York, already falls under the obligation to insure.

The timing of both the Bills is uncertain because opponents argue that their requirements could be discriminatory.

U.S. COMPANY NEWS  
Occidental makes counter-offer for Husky Oil; Eaton buys into Cuddeback; Bankers in European study. Page 26

# Ceausescu likely to boost trade

BY ROGER ROYES

ROMANIAN trade officials are optimistic that the much delayed agreement for Romania to build the BAC One-Eleven short-haul airliner will be finalised during President Ceausescu's four-day visit to Britain, which began yesterday.

Although final details of the deal under which Romania will build 82 of the aircraft in conjunction with British Aerospace have not been finalised, it is likely that some form of protocol will be signed when Mr. Ceausescu visits the company tomorrow.

Parallel deals with Rolls-Royce for the supply of engines and with other companies for various forms of aircraft equipment are also expected to be signed.

The British aerospace deal, worth some £200m and the largest of a number of deals currently under negotiation, provides an illustration of the Romanian policy of developing self-reliance.

Under the terms of the preliminary agreement, parts of the aircraft will be manufactured in both countries, with a gradual expansion of Romania's technical expertise until the country can take over full scale production of the aircraft.

About half the aircraft will be allocated to the fleet of Tarom, the Romanian airline, and the rest will be exported mainly to other East European countries.

This type of deal, blending the transfer of technical skills with a long-term trading relationship, is particularly attractive to Romania. The preference, indeed, Romania's whole trade philosophy derives from its view of itself as a developing country with a need for capital investment and technology.

As for all developing countries, such needs often pose a threat to independence through conditions imposed by supplier countries. Romania has tried to diminish this risk by encouraging co-production and joint ventures, especially in third countries.

As Romania passes to a higher stage of development—President Ceausescu speaks of Romania becoming a "medium developing country"—new threats arise from a possible dependence on imports of raw materials, such as iron ore, coking coal and, increasingly, oil, as well as on its own continuing exports of manufactured goods.

To side-step, if not ultimately

to avoid, these problems Romania has reduced its trade dependence on Comecon and the Soviet Union in particular. As Romania has shifted away from the West, including Britain, of course, has benefited. Indeed the Romanians, ever sensitive to the possibility of exploitation, have benefited rather too much, President Ceausescu will certainly be pressing Mr. Callaghan during talks to increase British purchases of Romanian goods.

British sales to Romania amounted to £80.4m last year while Romanian exports to Britain totalled £52.4m. This represented an increase of over £3m for Romania over 1976 compared to a corresponding British increase of over £30m.

In addition there is the vexed problem for Romania of the EEC anti-dumping barriers. Romania, unlike its other Comecon partners, has an agreement with the EEC and it is expected that Mr. Ceausescu will try to persuade Mr. Callaghan to secure a better deal from the Community for Romania.

Romania claims it has been discriminated against—especially by

Britain—in a range of areas, including textiles, steel, clothing. The Romanians eagerly point to the areas where British trade could be expanded: electronics, chemicals, mining machinery, shipping, perhaps air and maritime. Foreign trade officials carefully stressed last week the possibilities of joint steel projects in third countries.

In common with other East European countries, Romania's counter-trade, balance and compensation arrangements in talks with Romania officials last week it was clear that counter-trade above all would be emphasised in the forthcoming 1980-85 plan guidelines currently being drafted.

For Romania, counter-trade means that as far as the short-term balance of trade is concerned, Romania's difficulties with the West can be penetrated. Western markets on a long-term basis and eliminate some of the uncertainties in projecting future trade balances and financing requirements.

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For Romania, counter-trade means that as far as the short-term balance of trade is concerned, Romania's difficulties with the West can be penetrated. Western markets on a long-term basis and eliminate some of the uncertainties in projecting future trade balances and financing requirements.

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# Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

## AVIATION

### Guides the smaller planes home

Weather Scout II, and its companion Weather Scout II for light aircraft, are the first of a new family of weather radars for light aircraft. The new radar has a range of 90 nautical miles, with intermediate steps of 12, 30 and 60 miles, and scans weather conditions ahead of the aircraft in a 90-degree sector. It has RCA's X-Y scan which permits the use of alpha numerics to display range and mode information without interfering with the weather information being displayed. Avionics Systems, 8500 Balboa Blvd., Van Nuys, Calif. 91409, U.S.

## PROCESSING

### Sand cleans machines

THERE IS no danger of products being marked, as can happen with sandblasting, as chemicals remaining on surfaces to harm future handlers, says Factory Cleaners of its special machinery laundry service. Said to be the first hot fluidised sandblast service to be used as an industrial cleaning process in the U.K., the method was originally developed for use in the product finishing industry. The process has now been developed for the cleaning and stripping of electric motors, tools, cabling, electrical and electronic apparatus and various kinds of moulds, machinery and equipment. Basically, the principle involves a sandblast furnace filled with fine foundry sand; an electric fan pressurises a system of manifolds in the base of the furnace, with air heated by several burners; the hot air heats and fluidises the sand, reaching a temperature of 500 degrees C. The sand is circulated and heated through a gas burner and a second burner in the exhaust duct burns off any pollutants and impurities. Sand in such a fluidised state allows a gentle transfer of heat to metal objects and gently removes paint, resins, epoxies, grease, etc., from objects without pitting or burning the original surfaces. The capital cost to a firm of installing such equipment would not be economical unless it were being used continuously and the installation of the unit at one of the company's premises in Clapham, South London, allows for the collection of products to

## LEISURE

### Gives a first-class finish

IT IS not simple to provide a good finish for do-it-yourself swimming pools. But in the opinion of the National Research Development Corporation, the kit produced for this market by Seahorse Mouldings overcomes the problems. It consists of a one-piece moulding and the required water-treatment plant which is simply inserted into a prepared hole, the pool shell being manufactured by vacuum-forming. In this process, a sheet of thermoplastic material is heated

and forced into the shape of a mould by evacuating the space between them. Ideal for making products from sheet when high strength and good appearance are mandatory, the process involves a pool shell with no joints or seams, having internally moulded steps at each corner, with a hand grip running around the perimeter. This gives both safety and rigidity. Excavation has been kept to a minimum not to blunt the enthusiasm of the DIY clientele and the maximum size of the hole

## TRANSPORT

### Units go over the waves

THE TRANSPORTATION of fruit and frozen fish from the Canary Islands to Britain, is being effected in packaged refrigeration units — originally designed for road transport — which have been newly adapted for seagoing container duty by Transfrigo, Cranbourne Road, Transfrigo, Hants, PO12 1RJ (07017 58131).

This self-contained refrigeration package is mounted through a hole cut in the container front bulkhead which is recessed so that the equipment does not extend beyond the overall container frame, as required by ISO legislation. The condenser section is exterior to the box while the evaporator section protrudes into the refrigerated space.

Because of the hazards of salt water corrosion, spray, etc., exposed metal surfaces have been finished with marine quality paint, corrosion-resistant steel condensing coils have been additionally treated and the totally enclosed waterproof electric motors have been externally protected. Electrical wiring and control components have been housed in separate, watertight compartments and the wiring looms also specially protected.

Each of the containers will hold about 500 cartons, or about 12 tonnes, of fish which is deep frozen to minus 20 degrees C before loading; the temperature maintained throughout the voyage, and the unit is fitted with automatic defrost using the Transfrigo hot gas reverse cycle system.

## TEXTILES

### Mouse finds spinning problems

INCREASINGLY, with the variety of new spinning machines, various ways and the data collected in computers. A Swiss machine speeds up the process, higher efficiency, makes it fall, the practice is found to increase.

The Swiss instrument, called Zeltwegger, is a British design, G. W. Thornton and Sons, 10 Eden Place, Chesham, Bucks, MK3 1AU. Tel. 0494 525 2211. It developed a simple and effective system of monitoring spinning machines of all types. What is called a 'mouse' travels along the rim of the machine, registers any change in the encounter. After completing a traverse of the rim it returns to the starting point and should the machine still not be functioning, the mouse will stoppage to a microprocessor. This stores the information and gives details of any change in such spinning from a computer with this new piece of instrumentation.

## HANDLING

### Carries lesser load

A LIGHT duty overhead chain conveyor which has been designed to cope with loads of up to 15 kgs per hanger has been introduced by Bodin-Fisher Engineering, Box 12, Birmingham New Road, Edgbaston, West Midlands, B15 9JL (0692 4141).

Called the Flowmaster, it is offered as an alternative to the company's Flowlink which handles 45 kgs loads. The new addition to the range is said to have the same robust and durable qualities as its bigger brother and among its main features are the 6 inch pitch chain (allowing the utilisation of small radius bends), the totally enclosed chain for protection, and the versatility where a number of applications is concerned. The conveyor is driven by 11 hp motors and a wide range of different speeds is offered in both single and multi-drive forms.

## COMPONENTS

### Fuse will not blow

RELAYS, semiconductors and electronic modules are often protected against overloads with wire fuses. Where operating voltages do not exceed 48 V, Siemens is offering PTC resistors, which assume such a high resistance when exposed to overloads or overtemperatures that no damage can be done.

On termination of the fault condition it is no longer necessary to replace a blown fuse. The system is immediately ready for operation again. The new fuses, which require no special case, can be inserted directly in the circuit they are to protect. The actual protective element measures 7 mm x 7 mm with a maximum thickness of 2.5 mm and has 25 mm long terminal leads. The reference temperature at which the resistance suddenly shoots up is 120 degrees C. The continuous current in the protection condition remains below 100 mA. On termination of the overload condition the normal operating condition is automatically restored.

The new overload protector P8390-F51 is already being used to protect remote control relays in slide projectors. Such equipment is particularly prone to electrical and at the same time thermal overloads and can thus be very easily damaged. Siemens, Postfach 103, D-5000 Munich 1, Federal Republic of Germany.

## SECURITY

### Alarm for small users

PEOPLE LIVING alone in flats, of flats or, in the case of a small maisonettes and other small shopkeepers, inform passers-by of burglaries and other intrusions. Designed for easy installation, the box alarm fitted to the inner side can be attached with ordinary wood screws or double-sided tape is immediately signalled by a supplied by a small battery.

Now, with the use of a small box alarm fitted to the inner side can be attached with ordinary wood screws or double-sided tape is immediately signalled by a supplied by a small battery. Further from Delta Security, alarm which, says the maker, emits sufficient noise to alert Castle Street, Axminster, Devon, neighbours in the average block 0297 32033.

## Sun heat for the pool

SOLAR HEATING industries in the UK are going through a period of consolidation and more gradual expansion, while in several European countries, there is a virtual explosion of new installations, with the result that UK companies are finding a ready market for solar panels outside Britain, according to Robinsons Developments.

This company, which collaborated with ICI in the development of solar panels based on a special formulation of the latter's polypropylene plastics material, has produced panels and systems designed specifically for relatively low temperature applications, such as swimming pool heating.

With overseas orders accounting for some 50 per cent of business, the company has recently secured orders from Sweden and Switzerland for very large systems for municipal pools, the Swedish orders — for two pools — being funded by the Swedish Building Research Council which has entrusted Linköping University with the task of establishing detailed performance data.

One of the installations, with some 300 sq metres of Sunnell panels supplied by Robinsons, will be set up at Sjöbo in Northern Sweden, which is at about the same latitude as southern Ireland. But the long summer daylight hours will be significant in providing extended heating periods and the panels are expected to save the equivalent of 150 MW hours per year.

A comparable investigation is being carried out by Robinsons in the UK where 50 outdoor pools of various types, but with solar heating and half with no heating, are to be compared in performance over the next few months. All the heated pools have Sunnell panels.

The purpose of the survey is to provide information from a statistically representative number of solar heat pools across Britain and the results will be published as one of the papers presented at a technical meeting of the UK Section of the International Solar Energy Society on solar heating for swimming pools. This is to be held at the Royal Institution in London on October 15.

Further details of the Sunnell panels and the basic heating systems in which they are fitted can be obtained from Robinsons Developments, Robinson House, Wincall Industrial Estate, Wincall, Chester SO23 8LH (0662 6177).

The Royal Institution is at 21 Albemarle Street.



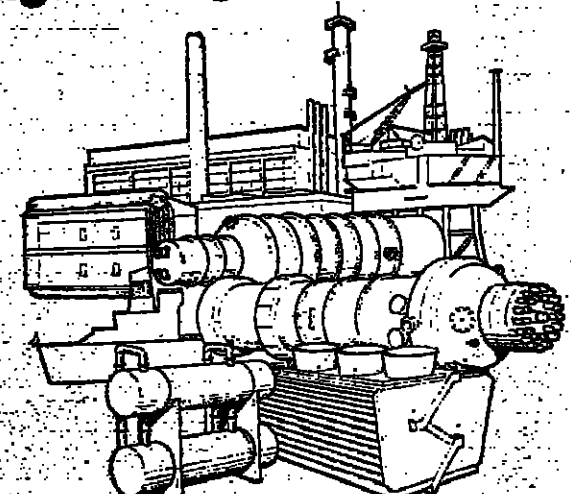
At this swimming pool, nearing completion at a house in Hitchin, Sunnell Oasis sun heat collectors are being installed to provide free heating to the water in the pool, which will be particularly acceptable if the present somewhat chilling weather continues.



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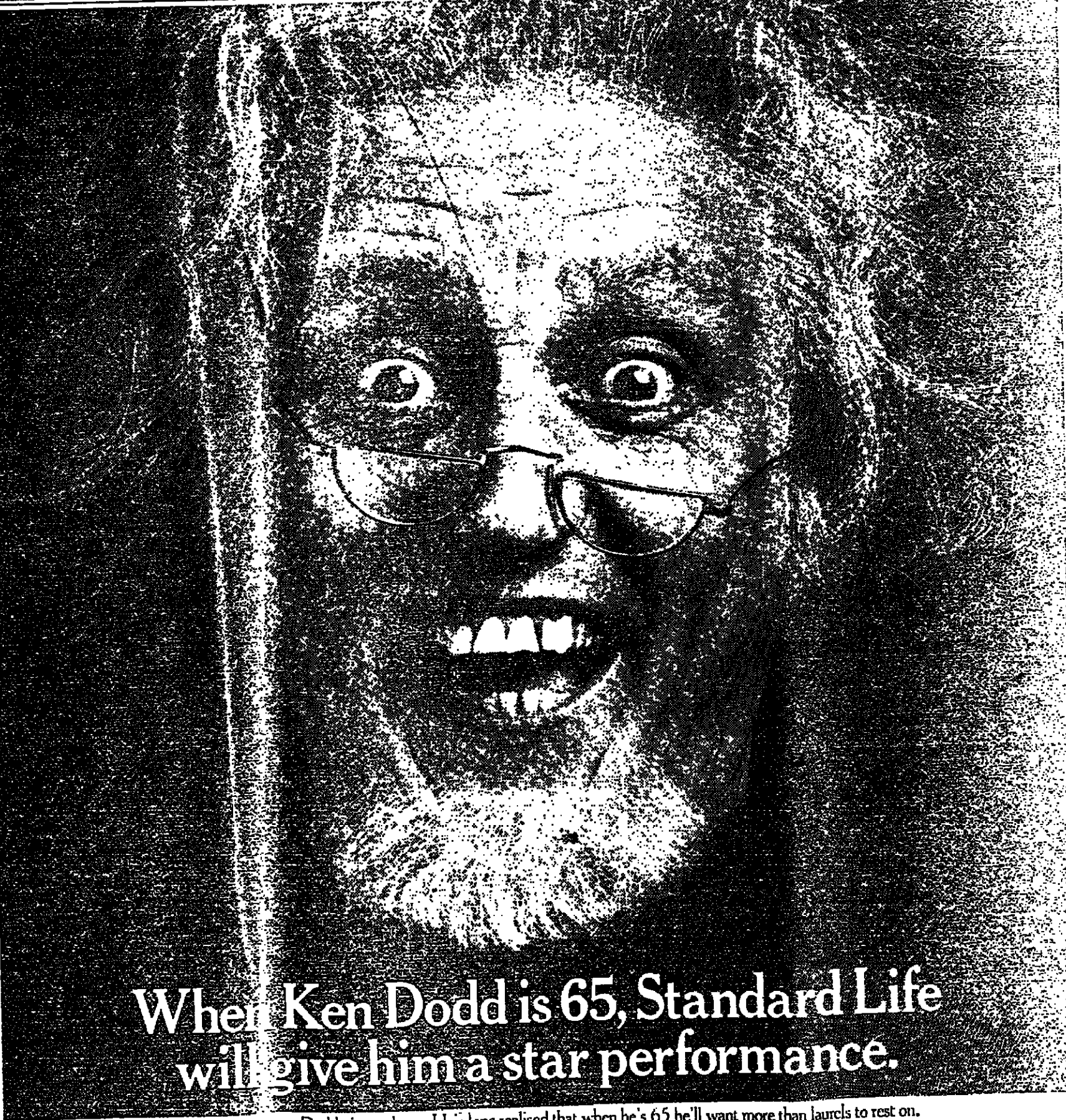
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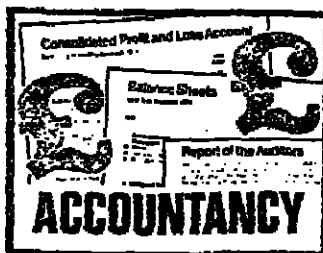
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THE AUDITING profession in Britain is being subjected to increasing criticism. This has partly been occasioned by comments from Department of Trade inspectors who have investigated the collapse of publicly-quoted companies, and by the public comment when companies have missed profit forecasts made at the time of takeover bids.



In order to help restore public confidence in the standards of auditing, the major accountancy bodies have joined forces to set up an Auditing Practices Committee (APC). One of the major objectives of the APC is to produce a series of recommended standards on auditing principles and practice.

But more fundamental criticism is being levelled at the whole idea of company audits. For example, doubts have been raised on whether there are any benefits to be derived from statutory audits and, if there are, whether they outweigh the costs involved. (A recent estimate has put the cost of auditing the accounts of all stock exchange quoted firms in 1975-76 at over £100m.)

Among the questions being asked are: does the audit function provide any safeguard against fraud by company directors? Does the audit report contain valuable information to the users of accounts? Does having a qualified audit report — implying some doubt on the auditor's part — make it harder for a company to obtain additional finance?

## Study data

In order to provide some data on the question of the audit function's value, a study has recently been made into the impact of qualified audit reports on investment decisions. Specifically an examination was made to see if share prices were affected if a set of accounts were qualified. If share prices did not move at all then this would indicate that the stock market was not placing any importance on the auditors' report; this, in turn, might be taken to imply that the auditing function is of only limited use.

The study showed that three types of qualified audit reports do contain information which investors consider as significant in their portfolio decision making.

It was also made clear that

investors do differentiate between the various types of qualification. This is backed up by evidence from elsewhere, which has shown that bank officers place considerable emphasis on some types of qualification when making lending decisions. There is no doubt that certain types of audit qualification considerably impair companies' creditworthiness and will make future financing that much more difficult.

Two suggestions for the auditing profession arose from the study. One is that some consideration should be given to releasing qualified reports at an earlier date, possibly when the earnings and dividend announcement is made (audit reports are attached to the accounts, which are usually published some weeks after the earnings announcement). At present, investors react to an earnings and dividend announcement and then have to revise their judgments when they learn some weeks later that this figure has been qualified in some sense by the company's auditors.

Secondly, because investors do differentiate between the reasons for qualification, some consideration should be given to explaining these reasons more fully. This would enhance the information value of the audit report.

Ideally, the reason for the qualification should be very specific and include estimates of the amounts of money involved (such as probable degree of underprovision for doubtful debts).

This suggestion is strengthened by the currently widespread criticism about the lack of information contained in a qualification.

In recent years there has been a large increase in the number of qualified audit reports in Great Britain. For example, a recent survey found a total of 176 qualified audit reports in the year ending June 30, 1976.

Other surveys based on recent periods have shown similar

# The battle to restore public confidence in auditing

BY DR. MICHAEL FIRTH

There are three major reasons for this big upsurge in audit qualifications.

First, the liquidity crisis that hit British industry in the mid-1970s left many firms with significant cash flow problems, so they have required substantial banking support. This reliance on banking support has often led to an audit qualification.

Second, increased adverse publicity has been given to companies that have been proved bankrupt even though they passed qualified audit reports in bankers withdrew their support. For example, many auditors into bankruptcy.

Third, little information is usually given on the extent to which a company's assets and liabilities are overstated. This makes it impossible for investors to adjust share prices to the correct value for the information contained in a qualified audit report, although some form of adjustment is likely.

4. *Subsidiary's audit.* Published accounts are sometimes qualified if the accounts of a subsidiary have either not been audited (usually when the subsidiary is based overseas) or have been audited by a different firm of accountants. The latter is only generally applied when the subsidiary's auditors are of an unknown standing.

5. *Statements on compliance.* Auditors will qualify accounts if they are not drawn up in compliance with the SSAPs in force at that time. Opinions differ as to whether SSAP qualifications are meaningful in that they have an impact on a company's share price. I could be said that they ought to have no impact on share prices, as the qualification relates to the method of accounting and not to whether the accounts show a true and fair view. This is the view taken by many industrial and commercial companies, which do not seem to be unduly worried about having their accounts qualified on this score.

But there is the counter argument that, if SSAPs are not being followed, it is because the alternative accounting treatment being used reports higher profits and higher net assets.

6. *"SSAP but concurred."* In a growing number of cases auditors are qualifying accounts on the basis of non-compliance with SSAPs, but at the same time stating that they concur with the alternative accounting treatment being used. Auditors often agree with SSAPs produced with an "average" company in mind, and the specific firm being audited may be subject to significantly different circumstances.

7. *Continued audit qualifications.* Many companies receive the same qualification every

## Impact of Audit Qualifications on Share Prices

Type of audit qualification	Qualified reports		Control group	
	Movement in share price %	Companies which suffered falls in share price %	Movement in share price %	Companies which suffered falls in share price %
True and fair view	-2.1	80	0.0	47
Going concern	-4.1	89	0.0	49
Asset value	-5.0	82	0.0	54
Subsidiary's audit	-0.1	47	0.0	47
SSAP	-0.7	69	0.0	50
SSAP but concurred	0.0	48	0.0	52
Continued qualification	-0.3	44	0.0	53

have come under critical fire from Department of Trade inspectors investigating the sudden collapse of major stock market quoted companies. The adverse publicity, and the growing concern over possible legal actions, have led the auditing profession to be more cautious, and more qualified reports have resulted.

Third, the issuance of Statements of Standard Accounting Practice (SSAPs) — by the Accounting Standards Committee — has increased substantially in the past few years, so that the chances of companies not complying with at least one of them — and thus receiving a qualification — have increased.

In a recent study of the impact of qualified audit reports on investment decisions, seven major different types of audit qualifications were identified. These were:

1. *True and fair view.* Some-

fications of this type express doubts about the value placed on the company's assets in its balance-sheet. Typically, the assets which are involved include land and buildings (where valuations have been fairly volatile in the recent past), loans (where the solvency of the borrower is in doubt), debtors (bad debts provisions) and inventories (obsolescent stock).

The above three types of qualification may be expected to have some impact on investment decisions and share prices. For example, if an auditor qualified a set of accounts because of uncertainty over asset values, this might raise doubts in the minds of investors over the net worth of the company, and share prices could well be marked down. Unfortunately, audit reports are rarely detailed enough to give much information about the degree of uncertainty.

## BUSINESS PROBLEMS

### No kidding

What, please, is the age at which a child can become a director of a private company?

Whilst there is no prescribed minimum age under the Companies Acts, the legal position of minors (under the law of England and Wales) makes it prudent to consider carefully the potential consequences of appointing a minor to the board of a company. You would do well to study one of the standard works on company law in a public reference library, e.g. paragraph 20-5 of Gore-Brown on

### Incomplete liquidation

Some months ago a private company went into voluntary liquidation and duly appointed a liquidator who in the absence of a tax clearance certificate with the Revenue refused to issue one on the grounds that one of the members (not a controlling one) and residing abroad must settle his outstanding tax affairs prior to the issue of such a certificate. Have the other members any legal means to compel liquidation?

We think that you cannot compel the completion of the liquidation in the circumstances you outline. It may be possible to outline the Revenue in quantifying its (maximum) claim so as to enable the release of some assets. But the members are basically faced with having to persuade the absent member to regularise his affairs. If the Revenue do quantify the claim, the liquidator could apply to the Court for directions (e.g. as to payment into court) to enable some payment out to be made.

### Lost tax file

Mine is a one-man business and I have been informed that my tax file has been mislaid. As the Inspector needs to re-construct the file from scratch, he has requested photocopies of documents and other details from my accountant going back several years. This is putting me to a lot of inconvenience which certainly involves accountancy fees for work which has already been done once. Can you inform me as to my legal position? We know of no clear authority, but suggest that you would be entitled to refuse to provide the copies sought so long as you afforded the Inspector of Taxes an opportunity to attend at your premises to inspect and take

## BY OUR LEGAL STAFF

copies of the relevant documents. In practice (and because such a visit may have attendant disadvantages) the better course is to invite the Inspector to agree to pay your reasonable costs of obtaining the information.

No legal responsibility can be accepted by the Financial Times for the answers given in these columns. All inquiries will be answered by post as soon as possible.

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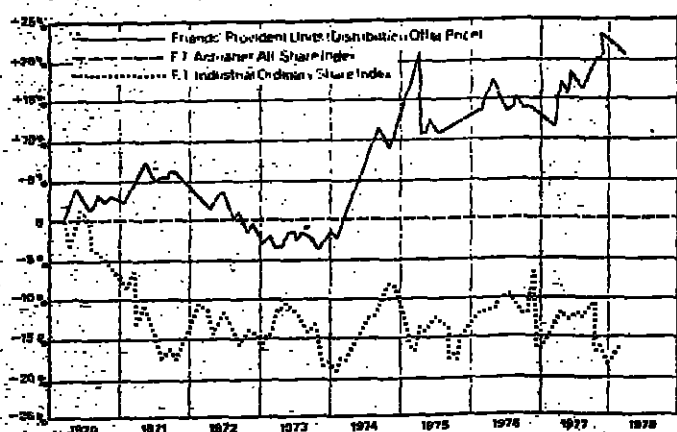
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# Unearns Tackling the Orient

FOR A small but vital industry that during the war was singled out for protection to preserve its technology, fishing tackle makers seem to have been curiously indolent in defending themselves since against low-cost competition from the Far East. Only now is a survey being prepared with a view to lodging a formal complaint of dumping and it is being discovered that the industry is ignorant about even basic statistics like output, exports and imports, how many are employed and so on. The full impact of the transition from a craft dominated, labour intensive industry to a market oriented one backed by high production equipment is only just beginning to be realised, perhaps just in time.

With an estimated 3m fisher folk (for they are not all men; women and children are among them) angling used to be able to lay claim to being the biggest participant sport. The value of the market is a matter of guesswork. Some projections put it around £30m a year, including exports, with tackle makers providing perhaps £30m-£40m of rods, reels, lines, keep nets, floats, flies and so on. Like most sports it is important to catch 'em young before some other stimulates their interest. The most lively section of fishers are those between 14 and 24, for after then family and other commitments come along. This year has been a poor one for new recruits, it seems.

Tackle makers complain that a disappointing season last year left a lot of shelves still full at the end of it, and they point to the competing claims among youngsters of the new craze of skateboarding and the inability of many school leavers to find jobs. But this does not appear to have had much effect in stopping the invasion of equipment from Japan, South Korea and Taiwan. Circumstances may



An angler with his tackle outside a London tackle shop.

business of needlemaking and has felt the sharp thrust of technical changes and the developing challenge from the Orient the most.

This certainly seems to be borne out by the way in which imports have been moving ahead—from £1m in 1967 to £4m in 1975 and to almost twice that last year. On the other hand exports have not been standing still, having moved up from only £350,280 in 1967 to £1.5m in 1975 and to £2.7m last year.

But often it has been a case of "If you can't beat them, join them," and because UK makers cannot compete with the prices being charged by South Korea and Taiwan, makers of reels and blanks—have rods—have imported them from these sources and from Japan, either selling them as completed tackle or assembling blanks for retailing by the angling shops. Even the biggest, like Hardy and Shakespeare, do this. So while cries of dumping are being raised, many in the industry are glad of the extra turnover this business represents.

In the popular and lower end of the market it is virtually impossible to match prices. The British equivalent of a Japanese

reel priced at £4.07 (from Taiwan at £1.93 and from South Korea at £3.21) is £21.50. A Japanese reel priced at £2.94 (one from Taiwan at 61p in 1976 and from South Korea at £1.14) costs £3.50 for the equivalent British reel. On the other hand another comparison shows a very cheap South Korean reel at £1.99 as being only 11p cheaper than the cheapest British, while a better fixed spool reel from Japan at £5.95 is only £1 cheaper than its British equivalent.

Fundamentally it is a question of too many small units and not enough investment capital. The structural changes being made to make the industry more competitive are coming almost exclusively from the international groupings like Gladding and Shakespeare, or manufacturers who are part of a more diversified group.

What seems to have been responsible for the outcry is a combination of slack trade and the opening of a new factory by Daiwa, of Tokyo, the largest tackle making group in the world, with several factories in Japan and others in South Korea, Taiwan and California. The factory is at Netherthorpe, in Lancashire, and is a fifty-fifty project with Grampian Hold-

ings, a subsidiary of which, Millards, has for many years bought nearly 10 per cent of its reels from Daiwa for distribution and is also a substantial supplier of guide rings to the industry. What has deeply offended some other manufacturers is that the venture has received Government aid (it is in an assisted area)—"helping our trade enemies to set up in our home market," as one put it.

And, indeed, Mr. Archie McCunn, managing director of the factory, makes no bones about the fact that he is aiming to get at least 6 per cent of the market in rods to justify the investment. On the other hand, he is quick to point out that the other objectives are to build up healthy exports to Europe and to make a contribution to import substitution. The 90 jobs already created are 90 more in an industry that has been shedding labour in the past eight months.

However, the British scene is far from being one of unrelieved gloom. Shakespeare, which went through a very bad patch eight or nine years ago and staggered on for three or four years until drastic reorganisation brought recovery, now employs 75, half as many again as 18 months ago. It is also moving into a brand new factory on the Redditch industrial estate where £50,000 worth of the most modern equipment has been installed. And Hardy is maintaining its 45-50 per cent export achievement, far higher than most, and has Japan among its top three markets.

These are the kind of performances others in the industry will need to emulate, for international fishing competitions are bringing greater appreciation of the advantages of the other fellow's tackle and breaking down the insularity of national industries by creating more unified designs.



## UCB - Brussels 1977

The following statement by Mr. P. Foriers, Chairman, serves as an introduction to the Directors report. The Shareholders' General Meeting was held on the 13th June, 1978.

The hopes, which your Board had at the same time last year, that the situation would progressively improve, have unfortunately not been fulfilled. The economic situation again deteriorated sharply during the second quarter of 1977. Our Film Sector achieved a modest increase in sales, but our Chemical Sector suffered the opposite. Both of them ended the year with a loss, as their level of activity was too reduced for them to be able to absorb the inevitable rises in costs of every kind.

May I remind you that these costs are particularly heavy in Belgium, which is the centre of our organisation, and are a special handicap for a group so dependent on exporting.

Despite the profits made by the Pharmaceutical Sector, the year 1977 finished with a loss of 397 million Belgian francs for the Group and 87.5 million for the parent company, UCB s.a. For the first time since the merger of 1961, UCB feels obliged not to pay a dividend.

The appropriate measures were speedily and energetically taken last summer as soon as the magnitude of the recession and the continuance of its unfavourable effects on the Group were clearly seen.

In the Film Sector, these have led to reductions in numbers employed which, though they have worsened the results for 1977, will improve those of subsequent years.

The major problem in this Sector is, however, structural: cellulose film worldwide has reached a declining phase to the advantage of other flexible packaging films, which we also produce. This transition from one film to the others has been more rapid than we anticipated and will adversely affect the results of the Sector even more in 1978 than in 1977.

The re-organisation made last year in the Chemical Sector has begun to bear fruit. Although the point of profitability has not yet been achieved, the activities of the Sector this year will, in the opinion of the Board, lead to results more encouraging than last year.

Several other measures have already been taken or will be taken in the course of the year. Their objective is a sharp reduction in general overhead costs at all levels and a re-organisation of those production centres most affected by the crisis. They cover not only the two Sectors currently making losses, but also the Pharmaceutical Sector, which is making a profit, but where profits can and must be improved.

Thanks to the precautions previously taken, the financial structure of the Group remains perfectly sound and gives us the necessary base for the recovery, which we are determined to achieve.

### FINANCIAL HIGHLIGHTS OF THE UCB GROUP

	1975	1976	1977
Group net sales	15,306	16,594	17,184
Cash flow	934	883	694
Profit/loss after tax	-270	184	-397
Investments during the year	1,444	827	813

	1975	1976	1977
Cash flow	724	689	397
Profit/loss after tax	-232	175	-334
Dividend: gross	125	140	—
net	125	140	—

Cash flow includes—  
— Depreciation taken in the profit and loss account. Depreciation on research expenditure amounting to 230 million francs in 1976 and 217 million francs in 1977 has, however, not been taken into account.  
— Investment grants received to the extent that they are not included in the profit and loss account.  
— Movements in provision for risks and losses in value taken in the profit and loss account.  
— Profit/loss after tax.  
Rate of exchange used: 1975 £1=BF80.02  
1976 £1=BF81.02  
1977 £1=BF82.89

Copies of the 1977 Annual Report (in English, French or Dutch) can be obtained on request from:

UCB s.a. Public Relations Department, Chaussée de Charleroi, 4  
B.1060 BRUSSELS-BELGIUM. TEL: (010) 322 537 12 20. TELEX: 21.330.

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\*Decanter Magazine February 1978. †NOP Jan. 1978.

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NOTICE IS HEREBY GIVEN that, pursuant to the provisions of the Indenture dated as of January 15, 1966 under which the above-described Debentures were issued, Morgan Guaranty Trust Company of New York, as Trustee, has selected for redemption on July 15, 1978, through operation of the Sinking Fund, at the principal amount thereof, together with accrued interest to said date, \$898,000 principal amount of the above described Debentures. The serial numbers of said Debentures so selected are as follows:

DEBENTURES OF \$1,000 EACH.																			
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	180	2038	3705	5499	7015	7936	9848	11956	13586	15438	17222	19146	20233	21170	22292	23517	24842	26167	27492
	172	2122	3717	5414	7103	7936	9848	11956	13586	15438	17222	19146	20233	21170	22292	23517	24842	26167	27492
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## FINANCIAL TIMES SURVEY

Wednesday, June 14 1978

مكتبة من الأصول

## Energy for Industry

Aid to industry and commerce worth £25m was announced by the Government yesterday to encourage conservation and the efficient use of energy. It comes at a time when it is vital that the temporary surplus of crude oil does not disguise the potential problems surrounding future energy supplies.

## Oil glut only a brief respite

By Ray Dafter

BRITISH PETROLEUM managing director, Christopher Laidlaw recently warned that the potential problems of world energy supplies were being "dangerously disguised" by the general surplus of crude oil. The so-called glut of oil supplies had been induced by the continuing economic recession and yet, even now, consumers were using oil at a faster rate than the level of new discoveries. The "bath" of proven oil reserves was slowly draining even though the taps were running, he said.

The warning might well have been applied to Britain's energy position. For there is a real danger that consumers—presented with abundant supplies of home-produced oil, gas, coal and electricity—may be lulled into a false sense of security. Worse still is the prospect of British industry emerging from a comparatively short period of the energy self-sufficiency in a com-

petitively weaker state than in 1973. Most of the other industrial nations dependent on large fuel imports will be forced (and helped) to adopt more efficient, energy-saving measures as costs inevitably rise. Their trade balance constraints will encourage such moves.

Although Britain will have substantial balance of payments relief from its self-sufficiency state, its energy consumers will not be shielded from rising prices. Oil prices are largely dictated by the main suppliers of free market crude, the Organisation of Petroleum Exporting Countries, North Sea oil and gas prices, and to a large extent the costs of coal and electricity, will continue to be influenced by OPEC's actions. And those actions, according to the latest Department of Energy forecasts, could lead to at least a doubling in oil prices in real terms by the end of the century.

In view of the large potential oil producing capacity that has still to be absorbed it seems unlikely that there will be any major movement in crude prices over the next couple of years. OPEC may achieve a modest price rise in the next 12 months by trimming its production levels. But its bargaining power will remain weakened so long as the economic recession continues. After all, world oil demand has not yet recovered to 1973 levels.

Paradoxically, the high-cost development of North Sea crude, which owes so much to the big increases in oil prices in 1973-74, is now a contributory factor to the softening in crude oil costs. The UK sector of the energy self-sufficiency in a com-

tion from British Gas in the long run the coal industry will have an even more important role to play in meeting energy demand. Increased nuclear-based electricity production and the development of alternative or renewable forms of energy will also be required once UK oil production begins to decline in the 1990s, or at least around the turn of the century. But just as important as these development programmes will be the need for energy conservation.

The National Coal Board, in another submission to the Commission, emphasised that the major market for coal continued to be power stations. Notwithstanding the increasing nuclear contribution to electricity generation the Coal Board's plans for the next five years provided for sales to power stations to increase from some 77m tonnes in the past financial year to over 80m tonnes. It was recognised, however, that the maintenance of such a market would be heavily influenced by coal's competitive position relative to oil. (The NCB is assuming that oil prices will broadly be maintained in real terms over the next five years.)

Cambridge Information and Research Services, in its latest Energy for Industry and Commerce report, states that industrial consumers can expect renewed efforts from Coal Board salesmen in their attempts to win back business previously lost to oil as the time arises for plant replacement.

Coal had lost about 80 per cent of its industrial market in the past 25 years and today the industrial sector accounts for only 9m tonnes a year of sales. "It remains to be seen whether new techniques such as fluidised bed combustion and improvements in mechanical handling pioneered by the Coal Board can assist in winning back this lost ground," the report adds.

There can be little doubt that

of energy could wipe over £1.2bn off their annual fuel bills. Last year industry and commerce spent £5.8bn on energy as against £5.02bn in 1976. The iron and steel industries accounted for about £1bn worth of the 1977 total. It is estimated that there could be a 10 per cent rise in the amount spent by industry and commerce this year.

But that bill could have been significantly higher but for the conservation measures taken so far. It is indicative of the way that major fuel users are now beginning to view the efficient use of energy and are seeking ways of cutting out waste that between 2,000 and 3,000 energy managers have been appointed (or at least designated) by UK companies. No less than 40 energy managers' groups have been set up around the country.

Any attempt to quantify their overall success to date is frustrated by numerous factors. No-one is quite sure how much the economic recession and normal plant modernisation and replacement programmes have contributed, in an incidental manner, to past energy savings. But a reasonable guess would put the conservation achievement since 1973 at over 5 per cent.

A preliminary analysis of information gathered through the Department of Industry's Industrial Energy Thrift Scheme suggested that annual energy savings which were open to the energy industry through the application of short-term measures involving existing technology were the equivalent of some 5.5m tonnes of oil a year corresponding to

an annual cost saving of £370m. The capital investment required for such a saving, according to the Department, would be about £560m, giving an average payback period of 1½ years.

The survey was based on information gained from 700 of the 2,200 visited under the Thrift Scheme in 1976-77. The 700 indicated that they had undertaken projects that would result in £3.5m worth of annual savings.

The scheme which, among other aims, attempts to promote the more efficient use of energy in manufacturing industry, is one of a number of projects set up by the Government, the fuel industries and private organisations in an attempt to stimulate conservation.

The Government is now co-ordinating its own efforts through an inter-departmental committee responsible to a ministerial committee under Mr. John Cunningham, Parliamentary Under Secretary for Energy. The Energy Department, which operates its own Energy Audits scheme, still acts as the lead department in the Government's conservation drive.

And there are signs that this state initiative is taking on a new form. Up until the end of last year it seemed that Government was content to guide and advise fuel users but leave them to take their own investment decisions. In essence, the Government was saying that economic benefits of conservation measures provided sufficient incentive for capital projects.

Then on December 12, Mr.

Wedgwood Benn launched a £300m programme which, he said, could lead to savings worth about £700m a year within a decade. That Government investment was concentrated in the public sector.

In March, Chancellor Denis Healey announced in his Budget speech that the Government was extending its aid to conservation measures in the private sector. The following day the Prime Minister unveiled a £240m package of support for home insulation projects.

Since then the Departments of Industry and Energy have been working on ways of pushing along energy "save-it" projects in industry and commerce.

The results of part of this work were revealed yesterday with the announcement that the Government is making available up to £25m over the next two years to encourage more efficient use of energy in industry and commerce.

The scheme is available to companies throughout the UK wishing to improve their heating plant or the insulation of their premises. Grants of up to 25 per cent will be available for work aimed at replacing or modernising boiler plant, and insulating systems and installing or improving combined heat and power systems.

These aid schemes may be recognition that in the current economic climate energy users may not be in a position to carry out all of the conservation measures that are desirable. It might also suggest that energy saving is still not receiving the degree of attention it deserves.

## Refused

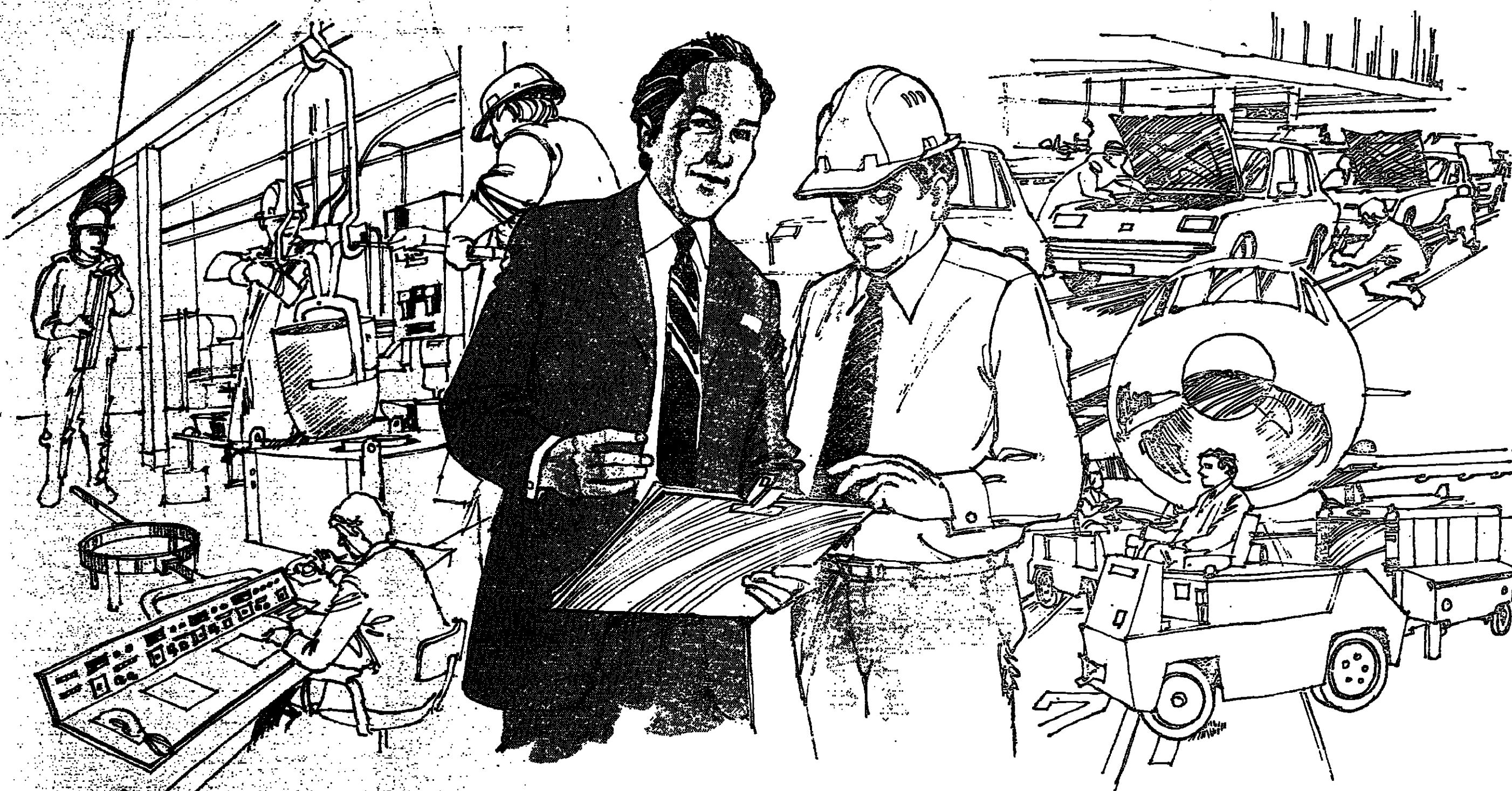
Gas prices, which in the industrial and commercial sectors are likely to rise in line with oil prices, have been repeatedly challenged as being too low by the electricity and coal industries. So far Mr. Anthony Wedgwood Benn, Energy Secretary, has refused to impose a requested "gas tax" although he has conceded that fuel pricing policies are among the most difficult problems that have been tackled by his advisory Energy Commission.

Sir Francis Tombs, chairman of the Electricity Council, pointed out to the Energy Commission earlier this month that the electricity industry was also facing increasing competi-

## Efficiency

Sir Derek Ezra, chairman of the National Coal Board, spelled out the importance of energy saving last December: "Failure to take vigorous steps to ensure improved efficiency of energy use in the years ahead, enabling the UK to achieve economic growth with a lower growth in energy consumption, might result in the longer term in a nation being forced to accept a reduction in the rate of economic growth." British industry might also be left less competitive against overseas manufacturers which had already taken conservation measures.

The Energy Commission, in its discussions, have reckoned on UK energy consumption by the end of the century being some 20 per cent below what it otherwise might have been without conservation effort. The lack of such a programme could add the equivalent of some 50m tonnes of coal to Britain's energy needs in the year 2000. Put another way, if that saving could be achieved overnight British industrial and commercial users



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## ENERGY FOR INDUSTRY II

## Oil versus gas

THE COAL and electricity industries are continuing to press for the imposition of some form of gas tax to bring the prices of gas supplies more in line with those of other energy resources. Sir Francis Tombs, chairman of the Electricity Council, again made the point at a meeting, earlier this month, of the Energy Commission—a body set up to advise the Government on energy policies.

The Government, he claimed in a paper submitted to the Commission, had favoured the gas industry. British Gas had exclusive access to North Sea gas and this enabled the Corporation to buy their gas supplies at an annual cost some £1bn. less than if they paid prices related to the cost of coal and oil.

The arguments—strongly refuted by British Gas and not altogether accepted by Mr. Anthony Wedgwood Benn, Energy Secretary—may be coming from the coal and electricity industries, but there is another major energy industry which would undoubtedly benefit if a gas tax was to be imposed: the oil sector.

**Glamour**

The glamour of North Sea exploration and production has tended to disguise the problems oil companies are now facing with their downstream activities. The North Sea has given British oil suppliers and consumers welcome security; output from the UK sector is now running at about 1m barrels a day—roughly half domestic consumption levels. By 1980 the North Sea production will make Britain one of the few industrial nations totally self-sufficient in oil (and, for that matter, energy in general) although oil refiners will continue to import a proportion of its needs in order to arrive at the correct blend of crudes for product requirements.

On the other hand production from such sources as the North Sea, Alaska and Mexico is adding appreciably to the traditional supplies of the Organisation of Petroleum Exporting Countries at a time of sluggish economic growth worldwide. Consequently the oil industry is embarrassed by a serious over-supply problem. The lack of growth in its main markets over recent years has left com-

panies with a good deal of refinery over-capacity, particularly in Western Europe. For instance, in the event companies have taken steps to reduce over 80m tonnes a year of refining capacity in the European Economic Community over the past 12 months or so, and still there is about 35 per cent too much primary distillation capacity.

Against this background OPEC, the arbiter of world crude oil prices, is becoming increasingly restless about the combined effect of the world recession and oil glut on its own earning power. It is a measure of OPEC's predicament that it seems to be cutting its output to around 26m barrels a day although it could produce 10m b/d more than that figure.

Oil prices must rise. The questions facing the oil industry, whole nations and fuel buyers alike are when, and by how much? There have been many warnings in recent months that we are living in something of a fool's paradise; that by the early or mid-1980s industrial nations could again be relying on OPEC to substantially increase output. The ball would be back in the exporters' court. Many fear that they could use this regained strength to impose very large increases in a bid to make up for past lost earnings. The Department of Energy expects oil prices to at least double in real terms over the next 20 years.

How soon, and how fiercely the price rises will be applied will again largely depend on the state of economies, the pace with which non-OPEC oil sources are exploited and the degree of energy conservation measures applied by Governments and major consumers.

The Department of Energy's monthly Energy Trends report gives some indication of the problems facing the oil industry in the UK. The average price of heavy fuel oil sold under new or renewed medium sized industrial contracts in the fourth quarter of last year stood at £56.40 a ton, lower than in the previous two quarters and barely 2 per cent higher than in the last three months of 1976. Viewed on the same basis gas stood at about £85.50 a ton, again down on the previous two

quarters and just £3.40 a ton more than in the fourth quarter of 1976.

Taking the average price of various fuels delivered to large industrial customers, the cost of heavy fuel oil is seen to have risen by 43 per cent in the three years from the beginning of 1975 to the end of 1977. In the same period, gas oil prices rose by 49 per cent. But these increases fell far short of the rising trend in the other fuel sectors: electricity prices rose 55 per cent, coal prices rose 71 per cent and gas prices by a massive 177 per cent—a leap which indicates that even without a gas tax the Gas Corporation has been taking its own price adjustment measures.

**Guide**

The figures are merely a guide; prices vary widely around the averages and the statistics can be quite dramatically influenced by the renegotiation of a major contract. Even so, they do show that oil product prices have been lagging, and the trend has continued this year. In some cases prices have been falling. (Petrol is now said to be as cheap in real terms as it was in 1973).

Mr. John Greenborough, managing director and deputy chairman of Shell U.K.—one of the major suppliers of oil products in Britain—recently reported that fierce competition by companies seeking to maintain market shares resulted in a serious erosion of proceeds. The U.K. group's annual report for 1977, when it made a loss of £11.3m, on its operations, states that this competition "held product selling prices down below costs."

There is plenty of evidence to suggest that it is not only competition between oil companies that is holding down prices. The strong marketing drive by British Gas in the industrial and commercial sectors is also having a major impact.

The reason is simple. The Corporation will have much more North Sea gas to sell in the future. Indeed, its supplies could increase by 50 per cent in the next few years. The Anglo-Norwegian Frigg Field, which was recently commissioned, should add some 1.5bn

cubic feet a day to supplies which are now running at about 4bn cubic feet a day. Shell/Esso's Brent Field should begin producing marketable natural gas in 1980 or 1981 when it will add at least a further 500m cubic feet to UK resources.

Then there is the prospect of new supplies being received from other fields in the central and northern sectors of the North Sea. Gas produced in association with oil in the Piper and Tartan fields will eventually be sent ashore via the Frigg gas line while fields to the north-east of the Shetland Islands may well be linked to the Brent gas trunk line.

A number of studies have been commissioned by the Government in a bid to find ways of collecting relatively small pockets of gas from other fields. At one stage it seemed that a major £5bn gas gathering pipeline network might be built but recent studies have suggested there is currently insufficient reserves to justify such an investment. (The position might change if oil companies make some important new discoveries or if Norwegian producers agree to share the UK facilities).

So alternative methods of gas collection are being evaluated. They include possible offshore liquefaction of gas; conversion of offshore gas into chemicals; and the use of gas to generate electricity which could then be sent ashore through subsea cables.

The problem facing the oil industry, Government and British Gas is to find a solution which does not lead to a glut of supplies in a relatively short period. If this happens the Corporation could be forced into selling gas too cheaply, to energy users who do not really need to burn a premium fuel. That is the Dutch Disease the gas industry talks about.

The Gas Corporation is in an awkward spot. For on the one hand it must provide its customers with an assurance that North Sea gas will last well into the next century but, at the same time, it must be careful in conveying the message that there is not enough to squander. "We have a large, but limited amount of gas to sell," is how Dr. Eric Clatworthy, director

for industrial and commercial gas, describes the position.

The Corporation states that in spite of the economic conditions that have clearly made the search for new customers more difficult than it might have been, marketing achievements are on target. But there is still a good way to go. In the past six years the state undertaking has sold between 800m to 1bn therms to the new premium market: it hopes to sell further supplies approaching those figures by 1982.

Undoubtedly this will provide the oil sector in particular with a good deal more competition although a major—but confidential—new study has encouraged British Gas in that it shows the potential premium market to be much greater than planned expansion.

The premium market is seen to encompass industrial and commercial customers who need a high grade fuel which can be

easily controlled with a minimum of pollution. British Gas maintains that virtually all of its firm contracts are being confined to this market: at a price akin to the going rate for gas oil. As a result, premium customers fixing new gas supply contracts are paying some 10.5p to 18.5p a therm—a far cry from the average of 10.10p a therm being paid by large industrial consumers at the end of last year, according to Energy Trends.

That lower figure illustrates the fact that many long-term contracts had still to be renegotiated at current fuel market-related prices. Those who have shut down production during the summer months when demand is weak. In essence British Gas is aiming to increase its flexibility in the southern sector of the North Sea. In return the undertaking has agreed to increase the price it is willing to pay for gas from

these fields.

So the pattern has been set. Over the coming years British Gas will be paying much higher prices for its North Sea supplies with output from the more northerly fields appreciably more expensive than southern gas. Industrial and commercial buyers of gas will find the fuel becoming increasingly dear as well, although just how expensive will largely depend on oil prices.

For British Gas is now linking the price of its industrial gas contracts to the scheduled gas oil price quoted by the three UK majors, Shell, Esso and British Petroleum. Oil price rises will trigger escalation adjustments in the gas contracts.

Whether the Government needs to apply a further price regulator, in the form of a gas tax, must be questionable.

Ray Daffier

## Coal needs to be taken seriously

IT IS a measure of the dramatically increased importance of coal that it should now be taken seriously as a major energy source for industry. The trouble is—the National Coal Board would argue—it is not yet being taken seriously enough.

First, the good news. The oil price rises of 1973-74 found a coal industry in this country doing well. Though it remained the major coal producer in Europe, investment had been at low levels, insufficient to bring new projects on stream to sustain constant levels of production.

The "Plan for Coal," agreed between government, unions and NCB in 1974, changed all that. Greatly increased investment was approved, and the industry began to develop multi-million pound projects like the Selby colliery and the Belvoir collieries, both to cost around £500m. Coal was on the road for new markets.

Its old markets, however, remained the most important. Coal is still the major fuel for the electricity supply industry, which takes around 60 per cent of 70-75m tonnes—of its annual output of around 120m tonnes. As the NCB likes to remind us, we all burn coal—in the form of electricity, or "coal by wire."

The second largest customer of the NCB is also industrial—the steel industry, which burns coal in the form of coke. The steel industry presently accounts for around 14m tonnes of the NCB's output.

General industry and the domestic coal burning market are of roughly similar importance to the NCB, both burning around 10m tonnes a year. However, the industrial market is the one where the Board believes growth can be found.

The major problem—at least in the short and medium terms—is that none of these markets presently looks buoyant. Steel is obviously in the doldrums, and the 14m tonnes now being taken is a decrease of over 3m tonnes from two years ago—and no one can say with confidence that the decline will not continue. The electricity supply industry's take for England and Wales has gone up in the present year to 75m tonnes, from last year's figure of around 70m tonnes—but that is unlikely to last. Central Electricity Generating Board officials say that much of this year's take will have to be stockpiled, meaning a reduced demand next year, probably back down again to 70m tonnes.

**Sluggish**

It seems that the general industrial market stays sluggish for two main reasons—a continuing supply of oil at a price not much above—if at all—that of coal, and the capital costs involved in switching from oil- or gas-fired equipment to coal.

These problems are difficult, if not insuperable. While gas and oil look attractive, why go to coal, which is usually more troublesome to handle, dirtier and offers little or no price advantage. The only real reason which the NCB has—and it is not an insuperable one—is that by switching to coal fired equipment now, the industrialist is safeguarding his future.

The argument runs like this. Oil may remain relatively stable in price for some years yet, but by the mid-1980s, it will begin to get dearer as production is cut back to prolong supplies. By the end of the century, supplies themselves will begin to run out (assuming there are no more very large discoveries of oil; they would have to be very large indeed, bigger than the North Sea fields, to make much difference).

Gas is, of course, even cheaper than oil. But it has possibly an even shorter life span (though in its case, there is a greater likelihood of substantial new discoveries in the North Sea, which might change the picture), and the NCB argues that North Sea gas will virtually be exhausted before the end of the century.

So the sales pitch is based on the long term, and on the possibility—always a fairly strong one—of disruption in oil supplies. So far, it has not appealed to a significant number of industrialists, and their take of coal has continued to decline. In short, it seems that the NCB is being presented with an embarrassment of riches, as the miners, inspired by the productivity bonus scheme, produce more coal for shrinking or static (or, in the case of domestic coal, marginally rising) markets.

Much of this is now more or less publicly discussed by the NCB, and is accepted with a rueful shrug. A senior NCB marketing man was told at a recent conference on coal that he would need all the sense of humour he evidently possessed, and he did not demur. What keeps the faith of the NCB alive—that coal will fully come into

its own is the prospects which are predicted for it at the end of the century: if they take the shape they might, then there will indeed be a revolution. Towards the end of last month, the Government announced that it would fund most of a £43m programme to achieve the substitution of coal-derived fuel for natural gas and oil by the end of the century. The major research programmes are concerned with liquid solvent extraction—producing oil from coal: fixed bed composite gasification, or gas from coal; and super-critical gas-solvent extraction, or chemical feedstock from coal.

**Optimistic**

Introducing this package of measures—which also included research into subsidised bed combustion, which means making steam much more efficiently—Mr. Alex Eadie, a junior Energy Minister, said that "King Coal" was back in its rightful place again. Mr. Eadie, an ex-miner, took an obvious delight in the fact that coal would—if the research proved successful—be the prime source of energy for the UK in the 21st century, as it had been in the 19th.

On his—and the NCB's—optimistic assumptions, the NCB will have to produce at least the 170m tonnes a year which is its target for the year 2000, and then some. It has been calculated that the oil-from-coal market could take around 80m tonnes by itself, possibly more. So the industry must expand now—since lead times for major new collieries are lengthening continually—in order to be prepared for the rush.

This does not mean—as you may have guessed—that energy will be cheaper in the future. It will inevitably be more costly, indeed, oil from coal and gasification, to say nothing of the even more esoteric schemes, only becomes feasible when costs for our present commodities like oil and gas go up to—at least—double their present levels. Coal is expensive to get, and it will be more so either as miners demand more pay for one of the most arduous jobs, or as very costly remote control equipment replaces miners underground.

However, it does mean that when the oil and gas run out, as they are bound to do sooner or later, there is a substitute fuel proven with reserves of at least 300 years. Beyond that point, speculation becomes not only heroic, but silly.

John Lloyd

## Healthy exports of standby equipment

ONE OF the more fortunate after effects of the miners' strikes and the three-day week was the welcome boost which it gave to the UK companies making standby generating equipment.

Many companies began to think that power cuts would become an annual feature of the British industrial climate, and so took steps to buy secondary generating sets. The market thus broadened quickly from those organisations like hospitals and offices with major computer centres to many companies which previously had regarded standby power as a convenience rather than a necessity.

The substantial home market thus created enabled the British manufacturers in the field to mount and sustain a very high level of export sales. The UK has remained probably the major supplier of standby generators in Europe with total sales of around 60,000 generator units a year.

Many of these generators are exported, particularly to Germany where they are made into full sets with foreign power units attached. However, the total number of sets made up in the UK complete with power units is about 30,000 units of which about 90 per cent are exported.

The three major UK manufacturers of generators split the home market about equally. Newage Engineers of Peterborough claims to have slightly the largest share followed by Markon and Hawker Siddley. Total production of generator units in the UK is of the order of £60m a year.

Diesel engines to drive the generators are supplied by a variety of sources including the General Electric Company

which supplies units for the higher rated sets, and Lister and Peter which supplied smaller units. Adapted engines from Ford, Leyland and Cummins are also widely used.

Last year, demand for UK made generators outstripped supply and Newage particularly suffered a long backlog because of a previous labour dispute. Although delivery schedules have been shortened, the forward orders for the industry still look healthy. UK manufacturers have been helped by low labour costs compared with those of competitors in say, Germany, and have been able to keep a healthy volume of business at a time when orders worldwide have been slackening.

**Remote**

In Germany the main generator manufacturers Siemens and AEG, have been having a relatively tougher time, particularly in markets like the Middle East and Africa where the British companies have an established position. About 40 per cent of sets now made are supplied as main sources of power, for example in remote locations like oil wells. The remaining 60 per cent of sets are used only as standby power in the event of a failure of the mains supply.

Most of the larger manufacturers have for some time concentrated on making standard units which have to be flexible enough to adapt to more than 90 per cent of all likely applications.

However, some specialist systems are made for example oil supply power to computer installations where a break of even a hundredth of a second cannot be tolerated. As it happens, these tend to become

pens that the majority of interruptions to the mains supply do last only for a split second, such a unit needs to be fast reacting and highly reliable. One such system supplied by Anton Piller, the German firm, uses an alternating current motor coupled to a direct current generator which supplies a battery. As soon as a power failure occurs, the two units change roles and the battery powers the direct current generator, which drives the alternating current motor turned generator to supply current to the computer.

Most standby units currently sold are operated by diesel engines, but in the range of 1,000 kW and above, especially where the set is used as a main power source, turbines are increasingly being used.

The strong emphasis on standard products in the lower range from 1kW to 1,000kW means that customers need to make a very careful appraisal of their needs before making a purchase, for failure to make the right decision can prove costly and result in a completely unsuitable installation.

If, for example, the unit is undersized it may fail to cater for the installations' demands, or alternatively it may absorb excessive capital by being more highly rated than is necessary.

It is important for a purchaser to strike a nice balance between the average demand expected to be made upon the set and the peak loading. Clearly it should have enough power to cope with the peak. But on the other hand it should not be generally be run at less than about 65 per cent of maximum capacity. This is because a diesel engine tends to become

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## A source of energy that will last for 300 years.

At the present rate of production, Britain has proved coal reserves which will last at least 300 years.

This puts Britain's Coal Industry in a strong position alongside strictly limited oil and gas supplies, and the continuing development of nuclear power. With this assured energy supply, based on coal, British industry can plan ahead with confidence.

**The benefits of being the EEC's biggest coal producer.**

Britain already has the biggest mining industry in the Community, producing as much coal as the rest of the EEC put together. To replace Britain's present coal output with imported oil would worsen Britain's balance of payments by £5,000m a year. This makes coal good for Britain as a whole.

**Vast modernisation programme.**

To ensure that these huge reserves are available when needed the NCB, under its "Plan for Coal," is already investing heavily in developing new collieries and in expanding existing pits.

We are still proving coal reserves in Britain four times as fast as we are using them. Selby, the biggest new coal project, will produce 10 million tons of coal a year. This and other new mines are keeping British coal-mining in the forefront of mining technology.

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Coal benefits all sorts of customers. With District Heating, coal fired plant supplies heating and hot water to whole communities. Individual users, from the biggest power station to quite small industrial plants and

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There's an enormous amount of know-how concentrated in the NCB Technical Service, covering all aspects of the efficient use of steam and hot water heating. If you need advice on making the best use of your existing plant, information on new equipment and techniques, how much new equipment costs and what savings it can give, ask the NCB. Expert help is available whether your business is large or small.

**NCB**  
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# Power station policy

THE EVENT that has caught advanced gas cooled reactor (AGR) station at Thorns while the public's attention has been the CEBG will shortly be clear. The Windscale inquiry into a proposed nuclear fuel reprocessing plant and the subsequent House of Commons vote to sanction the 5600m scheme. That is a decision which will start having an impact upon power supplies as the 1980s, and thereafter as pressurised water reactor design stocks of processable spent fuel so that it can again be converted up from British and foreign power stations.

The Windscale decision clears the way for future British nuclear power planning. Of much more immediate importance has been the recent Cabinet decision to launch a new power station building programme.

The contentious Drax B coal-fired power station has been given the go-ahead. That decision has been followed by a new policy towards the ordering of nuclear power stations. The South of Scotland Electricity Board is to have its next far and away from coal supplies.

Clearly, nuclear electricity will be the cheapest form of generation in the future programme. Even the most efficient coal-fired stations of 2,000 megawatts capacity will only be able to achieve a middle ranking in the hierarchy of British power station efficiency from now on.

## Problems

The AGRs got themselves a bad name because of the problems over their detailed design and the long delays experienced in their building programme. But now that the first two AGRs, Hinkley Point B and Hunterston B—are functioning some impressive efficiency figures are being obtained for power generation. They are producing some of the cheapest electricity in Britain. Worries about corrosion problems involving chromium alloy steel inside the reactors compelled the operators to limit the output of the stations from start-up onwards. But the latest news from the CEBG is that those problems are likely to be much less serious than at first feared, which means that the efficiency of the two AGRs can be further improved by raising the operating temperatures nearer to original design levels.

There is now more enthusiasm for the role of the AGRs than there has been on the British power scene for many a long year. When the three remaining AGRs now being built come into use in 1980-81 they will play a significant role by sharply reducing the total electricity generation costs.

Of the three, Dungeness B is now ten years late—but the engineers say they can see "light at the end of the tunnel"—and the stations at Heysham and Hartlepool are each six years late. The total of some 4,000 megawatts of cheap power that will be their eventual contribution is sorely needed now as a contribution to cheaper electricity costs. The CEBG stations are still under construction beyond their planned completion dates the actual cost to the nation in terms of dearer electricity amounts to £350m a year.

In short, the late completion of the three remaining AGRs is going to cost consumers at least a further £1bn in dearer electricity charges before they are ready.

Energy marketing is an essential part of the national energy conservation campaign. In the past year the area electricity boards saw sales of electricity increase by 1.2 per cent in a year when there was at times

up to 30 per cent excess generating capacity. The aim of the work has been done for the boards is to harmonise the use of electricity with available generating capacity. A "wise use" campaign has been running with some success.

The annual Electricity Council report commented: "All our marketing activities have been influenced by the need to advise and help people to conserve energy and to make wise use of electricity—at home, in shops and factories, and on the farms. The need will persist beyond our generation."

## Advertising

The electricity authorities are emphasising how people can maintain and improve living standards while also conserving energy. Advertising by the Electricity Council has been stressing the importance of good insulation and the advantages, in particular, of lagging hot water tanks. Another idea plugged in the energy saving campaign has been the instantaneous hot shower which is said to use less energy than the conventional bath.

The electricity authorities are co-operating with government departments, with the NEDO industrial sector committees, and with the universities to achieve greater energy savings

## Standby

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encrusted with carbon if it is run at too low a load.

Sometimes a compromise has to be reached and the customer has basically two choices. The first is to install a unit designed to cope with the average load and arrange for the supply to some non-essential loads to be cut out automatically as total demand approaches the maximum rating of the set. This can be satisfactory in some applications but may cause inconvenience, particularly if the set is used for standby power.

An alternative approach is to buy a bigger unit well able to cope with maximum demand but to arrange for a dummy load to be connected automatically if the unit starts to run lightly loaded. Clearly this second alternative is more expensive to install and to run.

It is really a question of the user making a policy decision about which services must always be maintained and balancing the extra cost of maintaining non-essential services against the risk and possible inconvenience of their being cut.

Increasingly buyers and manufacturers are having to consider the effects on workers of noise from standby or auxiliary power units. It is now accepted that a noise level of about 90 decibels is the maximum acceptable in an

ordinary factory. However, a generating set can easily produce noise levels of well over 100 decibels if it is not soundproofed. A variety of methods have been used to bring noise levels down to perhaps 70 decibels or the equivalent of an inexpensive car at about 30 miles per hour. Special suspension, a noise reducing cabinet and noise reduction systems on the cooling fan can be combined, but the cost can be fairly high—an extra £800 or more.

But in some cases it may even be cheaper to fit noise reduction systems to the set in the first place than face the possible extra expense of rebuilding to isolate the unit at a later date.

Improvements to such peripheral aspects of secondary power units seem likely to be the main emphasis over the next few years. Electronic control and the use of thyristors have probably yielded their main benefits on direct performance for the time being, although marginal improvements to ratings will no doubt continue to be made. Otherwise the emphasis will no doubt continue to be on ruggedness and reliability and easy access to servicing—all factors which fortunately favour the established UK suppliers.

Max Wilkinson

## The need for insulation

AN IMPORTANT stage in the Government's campaign to encourage greater use of insulation material in the U.K. is reaching a climax, as the Homes Insulation Bill is rushed through Parliament.

The bill is an integral part of the battery of measures taken by the Government in the last two years, which aim to cut substantially Britain's annual fuel bill of £16bn.

But industry, which has also been coaxed into readiness to meet the higher demand expected for insulation material, is not happy with the profits trend in the industry so far.

Under the Homes Insulation Bill, which should become law shortly, grants will be available from local authorities for loft insulation and for lagging hot and cold water tanks and pipes. The grants will be worth 66 per cent of the total cost of the job, up to a £50 limit.

The Government is prepared to spend £15m on the grants in 1978-79 and £25m in 1979-80. The whole programme could take up to ten years to complete, assuming about 500,000 houses a year are fitted with insulation.

The Homes Insulation Bill, which deals with private homes, will become law about nine months after the Government announced a major insulation programme for the public sector. Mr. Anthony Wedgwood Benn, Secretary for Energy, said in December that the Government was launching a ten-year programme to bring public sector dwellings up to a basic minimum standard of thermal insulation. Over 2m houses would be treated, and the cost of the operation for the first four years would be just under £30m annually. Another £2m would be spent on improving the insulation of Ministry of Defence buildings. Hospitals, other National Health buildings would qualify for capital investment of £25m by 1982, while schools would come in for £70m by the same date.

On June 1, the Department of the Environment announced thermal insulation standards for new non-domestic buildings. These standards will come into operation on June 1, 1979. And insulation in industry should be covered by a new Department of Industry scheme to be announced shortly.

## Benefits

The Government has also quantified the estimated benefits of its insulation programme. Insulating 500,000 private houses a year could save 1m tons of oil a year, which after ten years would be worth £70m. Mr. Benn's energy programme, which dealt in large part with insulating State-owned buildings, could save some £700m a year at current prices. Possibly the most comprehensive estimate is contained in a report, published in February this year, by the Buildings Working Group of the Advisory Council on Energy Conservation. This stated that by spending £1.5m on insulating existing homes, fuel could be saved equal to about 15 per cent of current domestic energy consumption.

The report also pointed out how swiftly any capital investment in insulation was repaid. Basic insulation of hot water cylinders could halve fuel consumption needs in a home, with a payback period of less than six months.

Department of Energy officials agree with these estimates. They say that a householder who fits a jacket to his tank, puts a draught excluder in his house, and fits insulation in his loft, can expect to reduce his annual fuel bill

eventually by about £100. And the cost of conversion may be under £50.

As well as drafting a mass of insulation measures, and quantifying the future benefits, the Government has also discreetly manoeuvred industry into a state of preparedness for the expected increase in demand.

Fibreglass, which belongs to Pilkington Brothers, Cape Insulation, part of Cape Industries, and Newalls Insulation, a subsidiary of Turner and Newall, are the three market leaders in the UK in the insulation business; all three have changed the structure of their business quite noticeably recently.

Fibreglass, which dominates the domestic insulation market, has spent roughly £20m in under two years on a new plant at Pontyrell in South Wales, to double its productive capacity.

## Equipment

Cape has also spent heavily on new equipment, but has also made a number of significant acquisitions. It bought the contracting side of Newalls Insulation from Turner and Newall in 1975, and this doubled the size of its insulation contracting side. More rationalisation and acquisitions followed, which led to Cape setting up a new Insulation Services subsidiary. Formed out of a merger between ICI Insulation Service and Pattison Insulations, the new operation is the largest company in the country to offer a comprehensive service for insulating domestic buildings.

Newalls Insulation has concentrated on developing new products, specially tailored for the anticipated expansion in the market. But it is also budgeting to spend about £8m on increasing its productive capacity for insulation.

One of the problems faced by the Government is that demand for insulation material has not risen smoothly to meet the increases in productive capacity available throughout industry.

Mr. Ronald Dent, chairman of Cape Industries, gives the flavour of the feeling among industrialists in his 1977 annual report. "Thermal insulation is a market of which the division has a substantial share. So far demand has failed to grow at a rate expected by many following the increased cost of energy, but higher standards are steadily being introduced."

In the short term the problem has become even more acute. In an effort to stimulate demand from the public, and meet industry's requirements, the Home Insulations Bill was introduced, a measure which, on the face of it, represents a sharp change from the Government's position some nine months ago. Then it thought that cost-saving benefits from home insulation were so self-evident that no financial incentives would be needed.

The new interventionist measures, however, have killed demand for insulation material temporarily stone-dead. The market is seasonal, with demand reaching a peak in the late summer and early autumn. But until the Government measures are through the Commons, and the grants are available from local authorities, it seems that very little insulation material will be bought.

Industry is convinced that the next few years will see a buoyant market for insulation material developing in the UK. But until then it will continue to reflect on the sluggish profits trend since the mid-1970s.

Christopher Dunn

# GAS GETS ON WITH IT—



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## ENERGY FOR INDUSTRY IV

## Potential for heat pumps

A GOVERNMENT study of heat pumps released a few months ago came to the rather surprising conclusion that no heat pump suitable for the biggest potential British market was available in the UK, nor could be expected without the expenditure of considerable research, development and life-testing resources. The surprise stems from the facts that the heat pump is a British invention, over 150 years old, of a kind which would appear to be ideally suited to the engineering skills of the country. Why has manufacturing industry neglected a machine with clear theoretical potential for conserving fuel?

The dominant reason is that it is much simpler to do what a heat pump can do merely by burning fuel. A heat pump is

an ingenious but nevertheless rather complex way of heating the second law of thermodynamics, to drive heat "uphill" from a cooler to a hotter source. It works rather like a refrigerator—and indeed its biggest market so far has proved to be space cooling in countries (such as the U.S.) which suffer from long hot summers. But the problems of translating the principles first enunciated by Lord Kelvin into robust machines at acceptable prices are more analogous to those of introducing new kinds of battery.

Heat pumps have been tried, with varying degrees of success, in such situations as the Festival Hall in London and the sewage system at Oxford. But the biggest potential market for heat pumps

would appear to be as an alternative to conventional central heating boilers in the home.

This was the conclusion reached by a workshop of Government, industry and academic experts, organised by the Energy Technology Support Unit (ETSU) at Harwell. The workshop arrived at an outline specification for two types of heat pump—neither of which exists at present—for the domestic sector when fuel costs have reached a level that would offset the costs of an intrinsically more sophisticated technology.

In the sector of industrial process heating and cooling, three groups of applications for heat pumps were examined by the Harwell workshop. These were:

1. Cases where refrigeration is the main requirement but space heating could be provided from the condenser coils with minimum extra cost.
2. Processes involving phase changes—drying, evaporation or boiling.
3. Processes involving successive heating and cooling.

1—Refrigeration. The main advantage here is that under certain conditions the same heat pumps can also provide space heating for little extra capital cost. A very short period of amortisation can sometimes be demonstrated. The workshop cites the Link 51 heat pump system installed in a Telford factory, where evaporator coils are keeping the dies in plastic injection moulding machines at a fixed temperature below the factory temperature. Heat from the dies is then rejected either through two outside condenser coils, or 14 inside condenser coils for space heating. But the principal criterion is to maintain a low die temperature regardless of the fluctuations in demand on the machines.

2—Drying, etc. Although a considerable amount of energy is used in these processes, most of the heat used to produce the phase change required is not recovered at present. From the standpoint of the heat pump, however, the processes differ considerably.

At the Capenhurst laboratories of the Electricity Council, a conventional reverse Rankine cycle system has been evaluated for drying at relatively low air temperatures, up to 110 degrees C. The mixture of air and fluorocarbon vapour working fluid for the heat pump is heated by condenser coil before it enters the drier. On leaving, it passes over the evaporator coil to condense out collected moisture. The system can be arranged with a closed air/vapour loop to prevent loss of heat. The arrangement was found to offer good control of humidity, though drying time might be longer—20-30 per cent longer in the case of a timber drying operation investigated.

## Efficiency

The laboratories set out to develop a heat pump of higher efficiency with a condenser temperature of 90 deg. C. Provided it is tailored specifically for continuous processing, this system appears to be able to offer a high efficiency of heat recovery.

There are more complex heat pump cycles, in which the vapour "effluent" is recompressed to recover the latent heat of evaporation. In other words, this vapour itself serves as the working fluid. For example, the Hi-Trec (high temperature recompression) cycle uses superheated steam; and the MVR (mechanical vapour recompression) cycle transfers heat directly by condensation.

With the novel Hi-Trec system, the effluent leaving the drier is split into two streams. One is compressed adiabatically so that its temperature and pressure increase, and at the higher pressure its latent heat of condensation can be transferred by a heat exchanger to the second stream. The second stream, heated and dried in this way, is returned to the drier at temperatures up to several hundred degrees C. Provided it is tailored specifically for continuous processing, this system appears to be able to offer a high efficiency of heat recovery.

The MVR cycle has been used industrially since the early years of this century, but only recently have advances in heat-exchange technology provided the lower compressor pressure ratios which, when combined with rising fuel prices, make the cycle economically attractive. The idea is that mechanical compression of the effluent vapour by the heat pump will raise its condensation temperature.

The whole vapour flow is compressed in this way and then passed through the heat exchanger in the evaporation vessel. Only a relatively small pressure ratio across the compressor is needed, so high heat pump efficiencies can be attained.

The MVR principle has been used in fairly large units, and is also finding a large market in small-scale desalination units. 2—Miscellaneous heating/cooling. The workshop identified some industrial processes—such as the production of aluminium cans—in which successive heating and cooling operations might provide opportunities for the heat pump. Its conclusion was that each process must be examined individually and the opportunities for a standard product might well prove to be small.

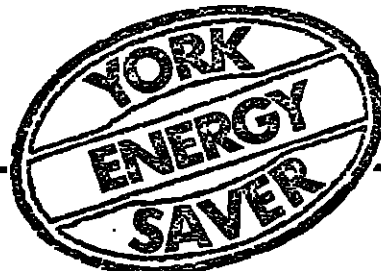
The conclusions of the ETSU workshop were that, for the industrial sector, there should be:

- 1—More effort on heat pumps designed for output temperatures above 100 deg. C.
- 2—A market survey of the potential for the MVR cycle in evaporation and boiling, aimed at identifying "barriers" to penetrating this market.
- 3—More research on the Hi-Trec cycle and its application to drying processes.

The countries which appear to be putting the greatest effort into heat pump technology at present are the U.S. and West Germany. In the U.S., General Electric claims to have the world's biggest sale of heat pumps and has a major research effort at its Corporate Research and Development Centre in Schenectady. There the view is taken that the basic heat pump cycle has little potential for improvement, but more advanced cycles afford a great deal. An interesting political point is that GE is anxious to establish the heat pump as a solar energy device and not as it is seen in the U.S. at present—as just another electricity consuming device. It believes that the solar-heated heat pump is the most energy efficient cycle devised so far.

\* UK workshop on heat pumps, ETSU R1. Available from the Department of Energy, Millbank, London SW1. No charge.

David Fishlock



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## Good housekeeping

DESPITE THE widespread publicity given to energy conservation in recent years it still comes as a surprise to many managers that approximately 10 per cent of fuel consumption and bills can be saved by application of relatively simple, "good housekeeping" techniques.

Such techniques include using the right tariff—many companies are paying more than they need to because they use the wrong tariff—training staff in energy conservation, and making more use of time-switches and thermostats to ensure energy is not being wasted when the office or factory is empty.

Establishing which good housekeeping techniques can be used can be achieved by carrying out an energy audit. In addition, it is important that there is a top-level commitment to energy saving within a company and a full-time energy manager should be appointed. Checking tariff selection and use is a job which could be carried out by such an energy manager. Energy supplied by the gas and electricity Boards is charged to customers at various tariff rates, each tariff being designed to provide energy at a cost appropriate to its use and to ensure an economic return to the Boards. Tariff selection is important at two points in the life of buildings. First when the building is designed or put into use and, second, during its normal use. Initially, the designer will probably select the tariff, but

once the building has been in use for some time circumstances may alter and the tariff selected originally may prove to be uneconomical. If this is the case, the owner or the user has to request a change and not the supplier to advise that a change may be beneficial. That is not to say that Boards never inform their customers of uneconomical tariff arrangements, but it is not one of their prime purposes.

In order to investigate a possible tariff change, it is necessary to collect data on energy consumption, plant size and loadings, and other relevant details such as building use, heating method and fuel, and occupancy patterns.

## Tariffs

It is possible to use a computer to check energy tariffs. The Property Services Agency, for example, has a computer system in operation for checking electricity accounts for all the Government properties it maintains. The main reason for using a computer is that it can help to identify in detail only where tariff changes might be most advantageous rather than as a check on every individual property. And even when using a computer, the final decision on tariff changes requires the knowledge of qualified technical staff, experienced in assessing the many inter-related aspects

of energy requirement and their effects on tariffs.

When a tariff change is made, the results should be closely monitored to ensure that the decision was correct and that the accounts are accurate.

There are several factors which determine the amount of energy consumed in a company or organisation. These factors include design of buildings and service installations, standard of maintenance, and the way that users operate the installations.

Although it is difficult to change the main structure of an office or factory once it has been built, there are minor structural changes that can be carried out to save energy. A reduction in the total area of glass, for example, coupled with improved thermal insulation of the solid area, should reduce energy expenditure and add to the comfort of the occupants.

Most car owners would agree that regular maintenance reduces fuel consumption, improves performance and minimises breakdowns. The same is true of energy-consuming installations in buildings, such as heating, ventilation, air-conditioning, lighting and water supply systems. Regular servicing of all components—burners, control equipment, refrigeration plant, fans, pumps, cooling towers, etc.—should be arranged as part of a planned maintenance programme.

The quantity of energy consumed by an installation depends not only on design and maintenance by professional and technical staff, but also on the way that the user operates it.

Where it is necessary, for example, to operate parts of a building outside normal hours, the areas used should be closely related so that only one part of the building needs to be in operation. Quite often the provision of additional doors to create lobbies, draught sealing to frames of doors and windows, and the fitting of door closers can show significant reductions in uncontrolled ventilation and heating requirements.

Light switching arrangements and groupings should provide enough flexibility to allow lights near windows to be switched off when only internal areas require lights.

Strict control should also be maintained over the operation of lighting installations to ensure that energy is not wasted when rooms are empty or only partly occupied. For example, when buildings are being cleaned before or after the normal office hours, lights are frequently left on during cleaning. Monitoring of lights during cleaning activities will usually, therefore, result in saving of energy.

To help bring these, and other, good housekeeping techniques together, companies need to carry out an energy audit.

An energy audit is basically a collection of consumption and building statistics embodied into a system to show clearly how and where each form of energy is being used. According to the Department of Energy's booklet on energy audits, the aim of such an audit is to quantify energy distribution and where possible relate it to production or other activities. The booklet suggests that companies examine the areas of high energy consumption, discuss with those concerned possible courses of action and choose the best after examining the financial implications. "Get the production manager, engineer, and cost accountant to work together as a team," it says.

## Audits

- It gives the following examples of energy audits:
- Improving the standard of maintenance of thermal insulation, instrumentation, combustion equipment, etc.
  - Checking automatic control equipment and if necessary adjusting the settings.
  - Carrying out plant efficiency trials.
  - Altering processing schedules to see if greater output can be

gained with the same amount of energy, or if the same output can be gained with less energy.

The Department's booklet also suggests that, when carrying out an energy audit, management, trade union representatives, and employees, keep them all informed of progress.

Moreover, it is essential that energy-saving measures are properly organised, fully agreed with the departments concerned in their implementation and are closely monitored and controlled by the manager responsible for energy saving. All staff involved in the running of buildings, the engineering services involved with this, should be aware of energy policy and the need to minimise energy consumption consistent with safety and comfort levels. For example, it is vital that staff responsible for the day-to-day operation of boilers, ventilation plant and other mechanical services, as well as lighting and electrical installations, are properly trained in their operation. There is a considerable amount of help available from the Department of Energy and professional energy consultants to help companies achieve reductions in energy consumption. But a considerable amount of energy can be saved by a commonsense approach to its use in office or factory.

David Churchill

## Encouraging conservation

THE GOVERNMENT launched its energy conservation campaign at the beginning of 1975 and since then it has allocated roughly £300m to it. Yesterday further funds were announced.

The current feeling among government officials is that the campaign is proving reasonably successful though no one can ever say that the maximum possible energy savings have been made and the task is therefore complete. What can be said is that industry seems to have responded to the conservation campaign rather better than domestic consumers of energy. Perhaps predictably, it is those industries that use most energy which have worked hardest at cutting down their use of fuel and electricity. In some cases the savings made have been dramatic.

The Department of Energy reckons that most industrial companies can reduce their consumption by about 10 per cent simply through improved housekeeping. Under the heading come such things as turning off lights when they are not needed, reducing heating where possible, improving the maintenance of machinery, re-scheduling production runs so as to avoid unnecessarily short ones, checking industrial furnaces and burners for heat loss and stopping steam leaks—eliminating a single steam leak through a 3 mm hole can save up to £700 a year.

A number of methods are being used to encourage industry to make simple energy savings of this type. The Department of Energy has tried to persuade all companies to appoint an energy manager, responsible for all aspects of conservation. The idea is that he should either be a senior manager or at least have the support of top executives. So far about 3,000 companies have appointed energy managers.

The Department has set up an energy "Quick Advice" service, which is free of charge, and it also makes grants of up to £60 towards the cost of a one-day visit to an organisation

by an energy consultant. In addition to this it provides advice and information on a more informal basis, often operating through regional officials of the Department of Industry. Seminars have been held for company managers and a considerable amount of literature on energy conservation is now available.

Once a company has looked to its housekeeping economies, the next stage is to examine ways of conserving energy by modifying plant or buying in new equipment. This obviously involves capital investment, but it can lead to energy savings of 15, 20, or even 30 per cent. Yet the Department is finding that one of the difficulties here is to persuade finance directors to agree to the capital spending required.

## Target

Where finance is made available, the pay-off can be considerable. British Petroleum, for example, is planning to spend £32m on energy conservation at its oil refineries over the next four years, but it is hoping for a saving of some £33m a year as a result. The company has set itself a target of saving 15 per cent of its energy consumption—based on 1973 levels—by 1980.

BP's annual energy bill runs into hundreds of millions of pounds and the advantage to the company of conservation is therefore considerable. The Department says it is much harder to persuade a smallish concern, which is low on energy consumption—say, 5 per cent of total costs—to make a real effort on conservation. It has been found that this sector of industry is not always prepared to make even basic housekeeping savings, let alone to put money into conservation.

Capital expenditure can be used to introduce new, energy-efficient plant to insulate or otherwise modify existing machinery and to finance energy recovery equipment. For example, it is now possible to recover heat from industrial

processes where cooling is required and then use it to heat office or factory buildings. This can be done in the case of plastic injection moulding where refrigeration is used to chill mould cooling water, and one plastics factory in Staffordshire claims to be saving over £15,000 a year using a heat pump.

As part of its campaign, the Department is financing a programme of demonstration projects to show industrial concerns the potential for energy saving—initially in the field of waste heat recovery. It is also undertaking studies of 21 energy-intensive industries in order to provide details of energy savings problems and potential. Reports

on these studies will be published where it is thought they will prove useful.

In addition to this the Government is considering introducing building regulations requiring the provision of appropriate controls on heating systems. If regulations are introduced they will apply to the installation or replacement of heating plant in industrial buildings.

Industry accounts for roughly 40 per cent of all the energy used in the UK and this means a total industrial fuel bill of about £6bn a year. Mr. Anthony Wedgwood Benn, the Energy Secretary, has said there is strong evidence to suggest that

a saving of 10 per cent at the very least is well within the grasp of industry." He estimated that this means "about £500m is there for the taking."

The long term aim of the Government's conservation campaign is to save the equivalent of 10m tons of oil a year by 1988. This would be worth about £700m a year in 1977 prices. The £1.5bn estimate of the total energy savings made in the three years from 1974 to 1976 seem promising in this context and would suggest that officials are right in claiming some measure of success for the conservation campaign.

Sue Cameron

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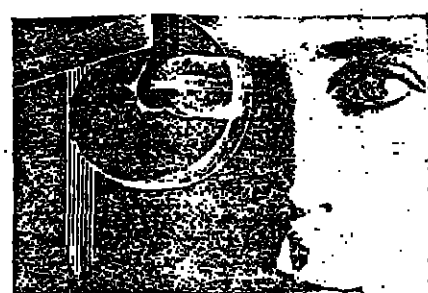
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## Steelmakers join the search

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Thus every steelmaker in the world has been stepping up the search for energy savings in the production process during the last few years as energy costs have soared. Energy saving has become one of the most significant areas in which steelmakers have been able to improve productivity.

But the simple equation of energy savings leading to cheaper steel has become complicated recently by the world recession in steel-making. For three years the big international industries have been in recession and producing at only

a fraction of their normal outputs. The new factor that has entered into all steelmakers' calculations is that efficiency in energy usage—as production falls.

As far as the British steel industry is concerned this means that while scientists and engineers are still straining for inventiveness to save the iron and steel works more work so that it can roll at a rate of some 2.5m tonnes a year while older works have been put on to a semi-care and maintenance basis by closing blast furnaces and steel furnaces.

But for British Steel and the other world steel-makers energy costs will remain disproportionately high as long as the recession in demand for steel persists.

The energy usage pattern of British Steel is now about 88 per cent coal, 22 per cent oil. (To bring the metal back up 5 per cent natural gas, and 5 per

cent to a proper temperature for work to be done upon it) have to be kept alive although they are doing far less work.

British Steel has been trying to cut down its own energy bills during recent months by concentrating available orders for steel upon a small number of the most efficient works. This has meant that, for instance, the Llanwern sheet works in South Wales has been given more work so that it can roll at a rate of some 2.5m tonnes a year while older works have been put on to a semi-care and maintenance basis by closing blast furnaces and steel furnaces.

Other world steel-makers energy costs will remain disproportionately high as long as the recession in demand for steel persists.

The energy usage pattern of British Steel is now about 88 per cent coal, 22 per cent oil. (To bring the metal back up 5 per cent natural gas, and 5 per

CONTINUED ON NEXT PAGE



## ENERGY FOR INDUSTRY V

# Government tries to set an example

THE PUBLIC sector is one of the highest single users of energy in the country. It spends about £2bn a year on energy, accounting for some 15 per cent of total consumption. Of this total, about 9 per cent is consumed in local authority housing.

The Government and other public sector bodies, therefore, are in a prime position to set a leading example to the rest of industry in the efficient use of energy.

Local authorities, under pressure from ratepayers to keep costs down during inflation, have been in the forefront of energy saving campaigns. In central Government, the Property Services Agency, which is responsible for the upkeep of all Government buildings, has also for some time been implementing energy saving programmes.

One of the earliest formal recognitions of the need for energy saving in the public sector came in 1955 when the former Ministry of Education issued a circular to all local authorities urging the appointment of an officer for energy conservation.

A few progressive local authorities, such as Kent, West Sussex, and Hertfordshire County Councils took notice of this circular and their success in fuel savings dates from that time.

Local authority buildings encompass a wide range of domestic, commercial and industrial premises, such as schools, offices, workshops, depots, residential homes and housing. Thus the potential area for savings is considerable. An authority with a fuel bill of £5m, for example, could expect a recurring annual saving in fuel costs of between £250,000 and £500,000. Savings accruing from energy saving measures can form a "rolling

programme" from which other measures can be financed.

One local authority which achieved energy savings of around 10 per cent was Walsall in the West Midlands. The council found in the mid-1970s that its education department was accounting for an increasing proportion of its energy budget. The 1974 bill of £650,000 was expected to rise to £1.2m by 1978 — about four-fifths of the total energy bill.

The council, therefore, decided to carry out a pilot study of energy saving measures in seven out of the 180 buildings for which the education department was responsible.

## Study

The pilot study revealed that heating was often left on unnecessarily at night and at weekends; thermostats were set at a level in excess of the statutory heating minimum; and defects found in the design of heating systems and the controls which manipulate them. The study came to the conclusion that there was "little to be done in many cases without significant capital expenditure but, on a cost-effective basis, there seemed little doubt that much expenditure would be justified."

Action was taken, however, to extend winter school holidays to save fuel. Early results of the pilot study showed that the average savings from such relatively cheap energy saving measures were in the region of 20 per cent. Other schools were told of savings that could be made on lighting and heating and the policy regarding use of premises, swimming pools and the kitchens.

Since then the average saving being achieved is 10.8 per cent.

with the seven schools in the pilot study maintaining savings of 21 per cent.

The Government has made financial help available to local authorities to carry out energy saving programmes. The main aim of last December's energy saving package was to raise the energy efficiency of a whole range of public sector buildings.

One area of the programme of considerable interest to local authorities is the Government's decision to bring a large number of public-sector dwellings up to a basic minimum standard of thermal insulation. Standards of insulation in local authority housing are very low: over 2m council homes fail to come up to even the basic minimum standard. The Government is therefore embarking on a 10-year programme of loft insulation, tank lagging and draught sealing for public-sector housing. Over the next four years this will involve an annual expenditure of over £28m.

In addition, there are to be talks between the Government and local authorities on the substantial savings to be made in the space-heating of buildings. Extra funds—up to £7m a year—are being made available for installation of heating controls and the appointment of staff specifically to ensure efficient energy management.

Within direct Government control, the Property Services Agency has undertaken to reduce its annual fuel consumption by some 30 per cent by 1979.

The PSA campaign is controlled centrally from London headquarters but monitored throughout its eight separate regions, including Scotland and Wales, with each unit co-ordinating the work of the Agency's mechanical and elec-

trical engineers and putting their recommendations into effect. Continuing liaison with the Department of Energy is also maintained and a profitable cross-fertilisation of ideas and schemes has resulted from the Department's co-ordinating committee, on which the PSA is represented.

Energy saving measures introduced by the PSA include setting office temperatures in Government buildings at 65 degrees F as opposed to the 68 degree F recommended. Such a relatively simple change can produce savings of many millions of pounds.

Perhaps one of the PSA's greatest single achievements to date has been the development, in conjunction with Honeywell, of an optimum start control mechanism, now being used in Government buildings throughout the UK. The system has been especially designed to match the particular heating requirements of the PSA's many buildings which are only intermittently occupied. A timing mechanism trips the heating system in advance of the employees' arrival and shuts it down after their departure, ensuring that fuel consumption is strictly limited to that period when personnel are likely to benefit.

The PSA has also devised a tariff selection computer programme aimed at ensuring that its gas and electricity supplies are provided under the most beneficial tariffs available. With the savings being achieved by both the PSA and local authorities, the Department of Energy hopes that industry will take heed and follow suit. But it may take more than mere exhortation to emulate the public sector for private industry to implement such savings.

David Churchill

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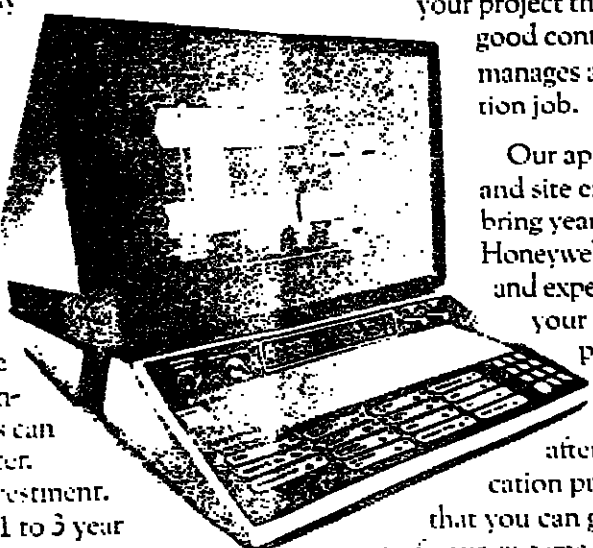
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## Competition increases

THE ENERGY supply market is becoming fiercely competitive as the oil, electricity and coal industries try to combat the growing share of sales that is accruing to the gas industry. This competition has been heightened by the world surplus of crude oil and refined products which has tended to depress prices and give rise to discount offers in some sectors.

This temporary surplus of energy might be rather at odds with the exhortations from the individual supply industries to industrial and domestic consumers alike to make energy conservation a top priority.

All four of the supply industries are intimately involved in the mission of explaining the energy conservation to industry. But it is also true that the message is inextricably involved with their marketing strategies, and none of them miss an opportunity to push the values of their own particular fuel at the same time that they are highlighting the virtues of energy conservation.

The central service provided by each supply industry, namely the provision of improved processes, techniques and management methods together offer both cash and energy savings and a strong reason to carry on using a particular fuel. Electricity and gas in particular can prove their worth in various premium applications and the supply industries are ready to involve themselves closely with a company to develop a special process technology.

A method developed by the electricity supply industry, for instance, has simplified the

process of drying imported bales of wool.

Australian wool is mechanically compressed into bales to save on expensive shipping space. It arrives at the mills already stuck together by their lanolin content. The bales have traditionally been stored for several days in a special room maintained at a heat well above the normal indoor temperature so, as the lanolin gradually softens, the individual fleeces could be separated. The method took time, space and money. The introduction of the method of radio frequency drying meant that the bales would soften in four minutes instead of hours.

The firm involved was able to save about 13,000 gallons of oil a year, worth more than £4,000 plus achieve other economies particularly in the saving of space.

Electricity holds the smallest part of the industrial market on a heat-supplied basis with some 12 per cent. But industry still buys some 78,000 GWh of electricity from the public supply, accounting for 40 per cent of electricity sold and amounting last year to a revenue of more than £1.5bn. The trend of sales to industry, though from a relatively small base, has shown consistent growth since the worst of the recession in the summer of 1975. Sales 1975/76 were expected to be about 5 per cent higher than in the previous year.

At least a quarter of industrial electrical energy is used in the form of electroheat. In this connection heat recovery systems are being successfully

applied in situations where there is a surplus reject heat and a need for heat elsewhere. On a broader front it is possible to recover heat from industrial processes where cooling is required and use it to heat offices and factory buildings.

About three-fifths of the electricity used in industry is for motive power — mainly for driving production machinery. Special care is needed in the selection of the type and size of electric motors to minimise energy costs throughout the life of the plant and initial capital costs can be reduced by selecting motors properly sized for the load. The electricity supply industry is ready to make available its experience to the building industry as well as the manufacturing sector. For several years it has been pursuing an approach of integrated design in its own buildings with special emphasis on the efficient use of energy.

But it is the gas industry which has probably gone furthest in linking the promotion of its fuel with its potential for saving costs in industrial processes, and it has even established a special School for Fuel Management.

The school has made rapid progress since it was first established at Solihull at the research station of British Gas' Midlands Region. In the first year of its operations alone more than 1,000 directors, senior executives, managers and other representatives of the business world attended its courses, either at the school itself or at sessions throughout the country.

Third, BSC is improving its coke-making techniques. One way is to pre-heat coal before it is fed into the coke ovens in order to remove moisture. Preheating plants are being installed at some BSC works.

More energy savings on BSC's massive coal bill are likely to come in the future from what is being called "Supercoking." It sounds dramatic. In reality it is coking coal and non-coking coal formed together into carbon briquettes. Experiments are going on at a plant in Scunthorpe. However, it would be many years—even if the experiments are successful—before the big BSC coke-using plants could all be equipped to make and use supercoke.

In the short term the main hope of all British steelmakers is that the market will continue to pick up after the hopeful signs of recent weeks. If plants can be worked hard they can overnight achieve something like a 10 per cent energy saving per tonne of iron or steel made compared with their performance at lower levels of working.

Roy Hodson

Kevin Done

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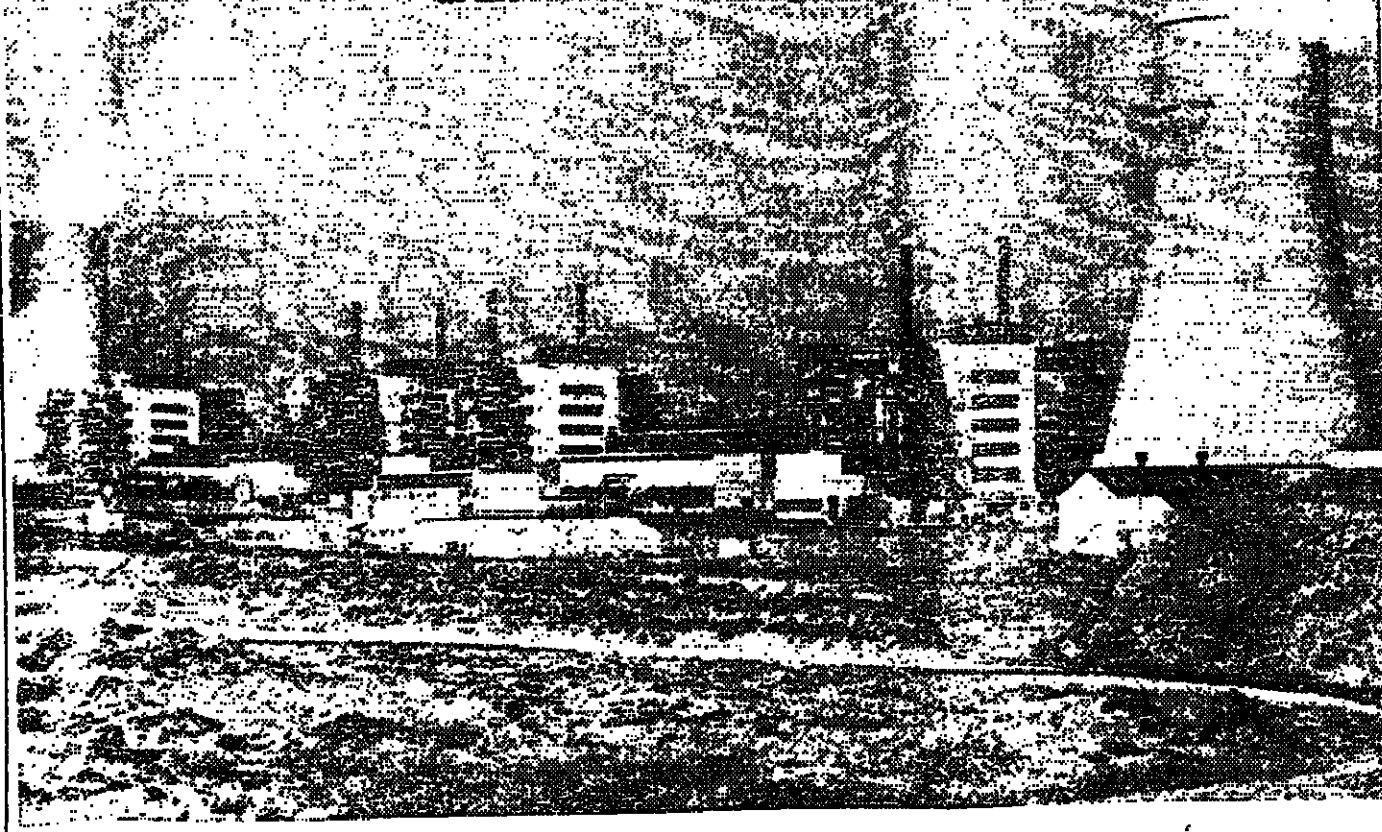
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CONTINUED FROM PREVIOUS PAGE

cent electricity. The private sector steel-makers are far more closely linked to electric steel-making. All told, when the British steel industry is working briskly, it takes 9 per cent of the nation's total energy consumption.

The principal energy savings in bulk steel making in recent years have been achieved by using high quality foreign iron ores which enable more iron to be produced for each tonne of coke at the blast furnace coking ovens. In parallel with that development blast furnace technology has itself improved with each furnace bigger and more efficient than the last. An optimum size now appears to have been reached with the 10,000 tonnes a day furnace being built for British Steel on Teesside. A second similar furnace was scheduled for Port Talbot, South Wales, but plans for that have been deferred indefinitely as part of the recasting of the Corporation's investment programme.

The change in the steelmaking process from open hearth furnaces—which take many hours to melt a charge and produce

the steel—to quick-acting basic oxygen vessels is also proving to be a major area of energy saving.

One of the major worries for steel managers in Britain is the rising price of coal. British Steel—by far the major purchaser—has agreed to take 75 per cent of its needs from the NCB. But the price has risen from £6 a tonne since 1970. Furthermore, more iron is becoming increasingly produced for each tonne of coke at the blast furnace coking ovens. In the coal the NCB wants to sell it during the steel recession.

Faced with a £280m coal bill for 10.5m tonnes of coking coal during the current year British Steel is casting around for new savings. Three main measures are being taken. A programme to use less coke is under way. By various devices, such as injecting oil into blast furnaces, savings can be made. There should be continuing gradual reductions in the ratio of coke to steel because of this sort of good housekeeping. Next BSC is blending varying qualities of coal by automatic selection methods in order to get the best mix from what the NCB sells.



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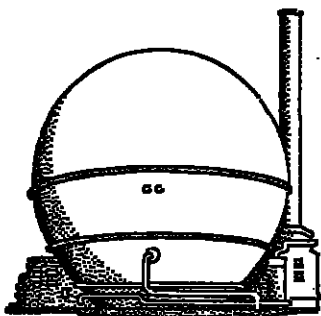
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## ENERGY FOR INDUSTRY VI

# Savings in chemicals

THE CHEMICALS industry is the amount of energy it uses one of the major industrial users of energy. But unlike other big users, such as the iron and steel industry, it also consumes considerable amounts of oil and gas as feedstock for a great range of different processes and products. Petroleum feedstocks for chemicals represent about 8 per cent of crude oil consumption in Western Europe and this is a share that has been steadily increasing.

The chemical sector consumes more than 14 per cent of the total energy used as fuel in industry in the UK, a share that is only surpassed by the iron and steel and engineering sectors. The result is, of course, that energy represents a higher-than-average proportion of total costs for chemicals compared with industry as a whole. This has meant that there has been a continuing awareness of the benefits that sensible use of energy can bring. Energy conservation is not a new phenomenon in the chemicals industry but the sector's effort to reduce consumption was certainly stepped up in the wake of the OPEC oil embargo, which brought a quadrupling of oil prices. Last year the industry spent more than £1bn on purchases of energy as fuel and feedstock.

But the easy gains have been made. Over the 10 years from 1976 to 1986 the conservation targets are of necessity rather less ambitious. The Chemical Industry Association, which is active in preaching energy conservation to all companies in the sector, forecasts that over the next 10 years energy savings per unit of product will amount to about 7 or 8 per cent. Energy consumption is expected to grow at about 1 per cent less than the growth of output from 1976 to 1981 and only about 1 per cent less from 1982 to 1986.

The UK chemicals industry compares well with its major rivals in Europe and the U.S. for the way it has learned to use energy more efficiently. Only France and West Germany have comparable records over the past 10 years, while the U.S. has lagged far behind. The U.S. has lacked the same economic stimulus given to the European industry to cut energy use and has lived for many more years with access to cheap energy. The U.S. boasts one of the most sophisticated chemical industries in the world, but with plentiful supplies of low-cost

oil and gas it has been wasteful. According to figures produced by the Chemical Industries Association, the British, French and West German industries' consumption of energy per unit of product is only 60 per cent of the total consumed by the U.S. industry.

All this is now changing of course and the U.S. industry has also learned from the shock delivered by the OPEC oil price increases. It is pouring considerable resources into the battle to become more energy-efficient and has now set up probably the most sophisticated energy monitoring system of any chemical industry in the world. The chemicals sector has been set the target by the U.S. Energy Department of cutting energy use by 14 per cent (measured by the amount used per unit of product) by 1980 compared with 1972.

Most of the chemical majors in the U.S., such as Du Pont or Dow, will comfortably exceed the industry's general goal. By

the end of last year, for instance, Du Pont, the largest U.S. chemical company had already cut its energy use per unit of product by 15.7 per cent. The company's energy savings from the beginning of 1974 to the end of 1977 totalled the equivalent of 17.4m barrels of oil.

In the UK leading chemical companies have made savings that are equally impressive. Imperial Chemical Industries has seen the average amount of energy used per unit of product fall by 18 per cent from 1971 to 1977. If it had continued to use energy at the 1971 rate the extra cost in 1977 would have been at least £40m. These savings resulted partly from the better running of existing plants and partly from expenditure on modifying existing processes. But the most significant savings can only come from radically new processes and plants.

Energy conservation efforts are not always cheap. British Petroleum, for example, is

spending £57m on energy saving projects in its chemical plants and refineries over the next few years. Of this, BP Chemicals is spending £25m on 40 separate schemes. But the resulting savings will more than justify investment on this scale. BP Chemicals has already cut energy consumption by more than 10 per cent compared with 1973. Now the BP group is aiming at cutting energy consumption by 15 per cent over the 1973-80 period. In the next four years £53m will be invested at BP's refineries to make them more energy efficient, but that should achieve annual savings of almost £33m.

The chemical industry is also the UK's largest private generator of electricity. It uses about 9 per cent of the total electricity consumed in the UK and 22 per cent of that used by industry. It generates about 30 per cent of the total itself. Its usage of electricity has been fairly stable over the last 10

years but the picture for its use of other fuels has changed dramatically. Gas has moved from a negligible market share in 1966 to controlling more than half of the industry's energy requirements. But there has also been a broader move towards premium fuel applications, which has increased, too, demand for the lighter oil fractions. Both these moves have been at the expense of coal.

Further changes in the UK will be evident with the availability of new feedstocks from the North Sea. For the first time supplies of ethane are becoming available for use as feedstock in specially developed ethylene plants. And several companies are investing many millions of pounds to make their base petrochemical plants more flexible, to allow the use of liquid petroleum gases (propane and butane) as well as gas oil and naphtha as the basic petrochemical feedstock.

Kevin Done

## Economical motoring

THE MOTOR industry has not, as yet, had to face up to the most serious implications of the oil crisis. Petrol prices today are about the same, in real terms, as they were in 1973. The motorist, despite the steep increases in 1974 and 1975, has not been forced to demand economy at any price. Larger-engined cars have recovered from the slump in demand and remain just as important a part of the market as they were five years ago.

All the same, the long-term pressures towards better fuel economy are having their effects. These changes are seen at their most dramatic in the U.S., where every car range is being totally remodelled to create lighter, and more efficient, vehicles. In Europe and the UK the change cannot be quite so striking, since the average

car is smaller in the first place. But similar design alterations are under way. Lighter components are being developed, more precise electronic controls being produced, and vehicles redesigned to give less resistance to the wind.

Legislation to the way the industry has to react in the U.S. By 1980, individual car manufacturers will have their annual vehicle output tested against target fuel consumption rules and will face a fine on every car if they fail to reach this. The benchmark is an average fuel consumption per manufacturer of 20 mpg within the next two years, and 27 mpg by 1985 — a figure which few European producers could achieve. By contrast, Britain's only equivalent step in forcing economy on the industry was the 1976 company car definition, in which the Treasury decided to make personal tax higher on larger-engined vehicles provided as a perk.

Although there are many critics of the American approach (some economists would like to see the industry forced to change through the petrol price mechanism) there is no doubt that it will speed up the application of new technology. The problem all manufacturers face in responding to the new challenges is that they have vast amounts of capital tied up in existing plants. An engine line, for instance, lasts for 25 years, and the normal approach to improving performance is related to this 25-year cycle. The demands in the U.S., however, are leading already to a great deal of work on new power units — General Motors is looking at diesels, and the whole industry is moving towards a replacement of its large capacity V8 units, which used to account for a little over 50 per cent of production, by V6s and even 4-cylinder engines. Diesels have also encountered a big surge of interest in standard units. They will use Europe. The reasons for this are lighter metals, new cylinder head designs, and the development will be weighted towards economy rather than performance. Aluminium will be widely

used. In many engines, electronics is also expected to make a contribution. Petrol injection methods, using electronic means of determining the moment of fuel injection, will gain wider currency because this is a more efficient way of supplying fuel to the engine, and because of this, gives a cleaner burn.

There is still a great deal of argument in the industry, however, about the real utility of diesel fuel. Some economists argue that since it is a denser fuel than petrol (about 10 per cent) there is little advantage in using it in terms of saving on the amount of oil being consumed; and the additional cost of heavier engineering to accommodate the stronger engines which are needed (diesels work by compressing air until fuel is hot enough to explode) for the higher compression ratios of the engine, make diesels more expensive vehicles to manufacture.

Nevertheless, there is clearly a lot of interest in diesels at present which is not going to evaporate overnight. On strong point of the engine is that it gives a number of manufacturers a quick route towards meeting the miles per gallon regulations in the U.S.

The desire to produce generally smaller capacity engines has also revived interest in turbocharging. The principle behind this technique is well-established: the engine exhaust gases are used to drive a compressor which in turn pumps extra air into the engine to give it a better performance. In the past, however, turbocharging has only been thought suitable for commercial vehicles partly because of the higher fuel consumption in this field, and partly because turbochargers are difficult to replace.

At the same time, a lot of work is going into petrol engine design as well. There is no doubt that the next generation of engines will have much improved economy over today's standard units. They will use lighter metals, new cylinder head designs, and the development will be weighted towards economy rather than performance. Aluminium will be widely

used. In many engines, electronics is also expected to make a contribution. Petrol injection methods, using electronic means of determining the moment of fuel injection, will gain wider currency because this is a more efficient way of supplying fuel to the engine, and because of this, gives a cleaner burn.

Electronics will also help economy in two other ways. First, their increasing application will generally lighten the weight of a car. Second, they will be called in to exercise much more control over the operation of the engine, thus maximising the use of fuel. Electronic ignition, injection and even gearbox control is now being developed for use in all ranges of cars; and "closed loop" systems of modifying engine performance through checking the exhaust gases are also gaining wider application.

The new ranges of cars which are being developed will also use more aluminium and plastic. The idea of this is to cut down weight, which is the biggest single factor in high fuel consumption. This means that the high content of steel in the modern car will gradually be reduced, giving way, in the main, to aluminium, plastic, and new alloys. Aluminium has, of course, been used by some manufacturers for engine construction for some time. But it is now moving into some areas of body panel manufacturing. In the U.S., a number of cars today have aluminium bonnets and boot lids. Plastic will similarly be used for both small components and panels.

Better aerodynamic design is also contributing to more efficient fuel usage. Research in this field is the main reason for the growing similarity of shape in today's cars, with the drooping nose, swept-back windscreen and wedge-shaped rear end. This sort of design reduces air friction, and can improve fuel consumption by up to 5 per cent over more conventional shapes.

Terry Dodsworth

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# Rain

by MICHAEL COVENEY

Gloria Grahame is not exactly a new life in Australia, but in all other respects she makes a fairly accurate assault on Somerset Maugham's unfortunate Sadie Thompson. You may remember Miss Grahame as the tight-lipped, brunet who received a cup of coffee in the face from Leo Marvin in *The Big Heat*. Like so many Hollywood idols she has taken to the stage in later years on the strength of her British debut. And in her British debut, the reputation does not lie. A little wisp of a woman, she may be, but Miss Grahame makes much of Miss Thompson as an ageing good-time girl stranded in the South Seas with a righteous missionary couple and a more forgiving paragon.

The 1920 Broadway adaptation by John Colton and Clemence Randolph breaks like an old-fashioned virtue of well-structured three-act melodrama. The ship's travellers are holed up in a room, the store-cum-hotel as a result of a cholera scare. Maugham's brilliant narrative is plundered for stage purposes to good effect—and even if Horn is given an unlikely native wife and Sadie's final virtuous opinion of the male sex



Gloria Grahame

# Young Guy Seeks Part-time Work

by B. A. YOUNG

"Do you do French?" Steve's head as he sits quietly at the supper-table, his ill-gotten tenner safely in his pocket, then turns to the irrelevant question of whether or not Jane has ever suspected Philip of suppressed homosexuality.

So the only important point raised is whether "sex offenders" should be understood or punished, and as this is skated over in a couple of minutes there isn't much to be extracted from the play. If Steve were not such a pleasantly unambitious boy (when asked by the one client we are allowed to see if he does "French" he whips out Racine's *Iphigénie* and reads it to him), we could be sure that he would take up relief massage in a big way, having found out that it causes him little trouble, brings in good profits, and is not to be punished by his parents; but I doubt if this is Mr. Bowen's message.

Rita Davies and Michael Browning play the parents, Adrian Hall plays Steve. The director is Alaric Corder.

# The Lunatic, The Lover and the Poet

by ANTONY THORNCROFT

For someone as "mad, bad and dangerous to know" as Lord Byron this evening in his country is surprisingly dull, a worthy and reverent mood is set from the start as the quartet of actors troop on stage with their files tucked under their arms like so many tax inspectors. They are joined by a sombre trio of musicians and the lesson begins.

Byron's life is diligently traced, with Derek Jacobi hogging the title role without the aid of a gaudy leg—he did enough gaudy dragging in *I, Claudius*. His wife is all the women in the poet's life while Julian Glover and Harriet Innocent make do as friends, servants, publishers, etc. It could have sparked off the quotations had been sharper, the interaction between speakers more ping-pong, the music more imaginative. As it was it was just pleasant.

There were moments—Harold Innocent was affecting in his description of Byron's death at Missolonghi and Isabella Millbank, bemused, Annabella Millbank, unfortunate wife, the poet enjoyed himself with the poems, but there were too few of them, and too much geographical detail and tedious commentary. It never became clear and Byron had to leave England and

## Television

# Whatever happened to the news

by CHRIS DUNKLEY

Any doubt that television was suffering from a bizarre affliction affecting the mental processes of its staff had to be abandoned finally on Monday last week. That was the day when the five-power conference on Zaire was held in Paris. It was the day when five people were charged with complicity in the Mory kidnapping. It was the day when the education voucher report was published. In short it was the day when England beat Pakistan in the first Test and Willis attacked Qasim with a bouncer. Colin Powers won the European light welterweight title in Paris, three of his competitors were killed in the Isle of Man TT sidecar race.

So what did the BBC and ITV news programmes decide to lead on? The banning of some pathetic Scottish footballer whose urine contained fenethamine. Television has surely reached a pretty desperate condition when it requires the former editor of a magazine as good as *The Economist* to open *News At Ten* with an item in which he announces (in tones momentous enough to mark the suicide of a much loved sovereign): "These are the pills... and the camera cuts to a huge close-up of yellow tablets being poured out of a bottle. The whole thing would hardly have been done more portentously if the pills had been used to poison the entire Cabinet. It is difficult to understand how Alastair Burnet can look himself in the face while shaving in the morning after delivering such rubbish.

More appalling still, the producers of BBC's *Late News* on 2 also decided that the pill-popping of the Scot was the most significant event in the world. That was even more disturbing because we have come to rely upon the BBC's second channel to provide a reserve of relative sanity whatever absurd frenzies the other two channels may drive one another into.

But there are some disturbing straws in the wind blowing through this reserve. Not only is the BBC2 news virtually indistinguishable from BBC1's but powerful rumour has it that after *Newsday* comes off the air for its usual (if excessive) "morning break" on June 23, it will never reappear. *Newsday* is the only daily programme on British television where serious journalism—as that phrase would be understood at the Financial Times, say—is the rule; where foreign news is given due weight and where a single item may take up most of the programme if it is considered important enough, as was Michael Charlton's interview with Morarji Desai on Thursday, for instance.

*Newsday* goes, what programme will the BBC have left on their channel, capable of dealing seriously with really topical events? Tonight produces good middle of the road journalism, with occasional wild aberrations, but it comes on relatively late in the evening and even at its most serious it stands towards the popular end of the spectrum compared to *Newsday*. The answer is that apart from the weekly *Panorama* the BBC will have nothing of the sort left. It has had anything like it of course.

And yet I understand that for some time now Dick Francis, BBC television's head of news and current affairs (NCA) has been investigating with the various departments concerned the idea of creating not greater similarity but a sharper contrast between BBC1's news and current affairs and BBC2's; possibly the kind of contrast that one finds between news on Radio 2 and on Radio 3. In other words the idea is to make NCA on BBC2 more serious.

It is acknowledged that the difference in substance might not be very great, but then a more varied style and approach could make a huge difference: if the item on the doped footballer had been shortened, and placed last



Francis Tomelty and Den Henderson in 'Strangers'

instead of first, that news bulletin would have been a very different kettle of fish.

The trouble is that with the summer break, then (judging from the past) the election, and then the election itself, it seems highly unlikely that attempts at any new regular NCA programmes will be possible before early November, and equally unlikely that a complete new pattern could be properly tried out and established before next April. Meanwhile *Newsday* marches on, on an untimely grave, and *News On 2* suffers from a brand of timidity and cautioning which is undistinguishable from that of the news on both other channels.

However, we have wandered rather far from the particular disease afflicting television with which this article started. It is, of course, called *The World Cup* and a superficial impression is that it has infected everything on the box. Surprisingly, though, there is quite a lot hidden away in odd corners which has remained uninfected by the contagion: some repeats, some regular programmes, and even a few new ones.

The repeats of Roger Jenkins's short film series from BBC Bristol, *Sea Tales*, are well worth catching. Its directors—John Elliot last week in *Captain Varley Goes Home*—have used their native wit and imagination to make a film of film to striking effect. Elliot was credited as writer as well as director which is impressive since the words had a feel of verisimilitude smacking of real documentary. But it was the cutting from man and face to man and face, putting the man in his context and bringing that context home to the viewer which was so telling.

The inherently banal story of a cross-Channel ferry captain making his last voyage was given an extraordinary poignancy which videotape would be powerless to convey; a fact which was particularly striking on the day after watching Part 6 of *The Devil's Crown* on BBC2.

The atmosphere of this all-studio all-tape story of the Plantagenets is becoming very close and stuffy; one longs for the wonderful Jane Lapotaire and her brood to get out of the dark cramped cellars in which they seem to intrude, fight and have their entire being, and an air of mad filmed pallor through the countryside—if only for 30 seconds.

However much one sympathises with the difficulties of

working inside budgets, and however interesting the story may be (which it is, for anyone caught in the regularity of a fragmentary slice of English school life), it is hard not to be irritated eventually by the sheer unreality of whole generations existing in limbo and never going outdoors.

Even so, it is less than one hundredth of a 60-minute programme, and it is a pity that the BBC should have drawn between Norway and Morocco played out there on the park that we have learned to call Corduba.

The best series of any sort currently running on British television, *Landscapes of England*, ends tonight with Professor W. G. Hoskins looking at the places he knows best: his home town of Exeter and the surrounding Devon countryside. His lyrical appreciation of the English landscape is typical of the best aspects of the series. Anyone who, like me, will greatly miss the weekly gourmet meal of landscape history dished up by Hoskins can find all 12 of his tapes (this series and the previous one in being) on paperback just published by the BBC, *One Man's England* (£3).

But while this seems to contain practically every word he has said on screen, as well as many good photographs, it is at best only a reminder of the joy of the programmes themselves. No book can begin to reproduce the marvellously rounded experience provided by Nat Crosby's magnificent film particularly that shot from helicopters, the music by Gerald Finzi, John Ireland and others, and send him out to keep coal-fessor's own inimitable presence, in the seething South American cauldron that we have learned Hoskins' friends used to "set his to call Mendoza.

dish of cream for him o' nights when Stonehenge was new. Yes, before the First Men made the landscape under Chanctonbury Ring, and I have a strong feeling that in putting all the parts together, Peter Jones has produced a classic.

Another established series and one that continues through thick and thin and World Cups is *U & S H*, which still raises more laughs per minute than any other series (including *Rhoda*). However it is becoming dangerously sentimental; not only is the once-randy Radar being turned into a goodly choirboy type, but there is a tendency to the piker-poker-motives hanging in the air. Thus a recent episode ended with Hawkeye asking the elderly C.O. which of the three wars he served in was worst, and the C.O. muttering "All of them, son, all of them. War is still seen as vile, and the wisecracking doctors are the only sane men around, but the series has gone soft at the edges if not yet at the centre.

More needs to be seen of the latest crime series—*Strangers* from last September—before being sure, but the first episode looked like *Gangsters* running slowly in reverse: starting with the mandatory car chase through a multi-storey car park (complete with scattered garbage) it ended with the scene in the gay night club cum brothel cum gambling den. Don Henderson wore gloves throughout just as he did (surely?) in his last crime series.

He should be careful: some might say he's got the wrong idea and send him out to keep coal-fessor's own inimitable presence, in the seething South American cauldron that we have learned Hoskins' friends used to "set his to call Mendoza.

## Shaw

# I'm talking about Jerusalem

by B. A. YOUNG

The Dolphin Theatre has done well to give us the whole of the Wesker Trilogy in sequence, for among other things it shows us that this last play of the three is a better piece than it has some times seemed. *I'm Talking about Jerusalem* is Arnold Wesker's first shot at creating an ideal Socialist community, and here he keeps his feet on the ground. When he tried something more ambitious in *The Very Own and Golden City*, substituting an entire town for a hand-made furniture workshop, he wrote nonsense. *I'm Talking about Jerusalem* is very sound sense; and because it is practical and truthful it ends in failure.

Dave Simmonds, whom we met earlier as the man who fought in the Spanish civil war, has decided after serving in the RAF to set up as a small craftsman in a remote Norfolk cottage. (Mr. Wesker's characters have astonishing good luck at finding cottages in *The Four Seasons* they find one empty and furnished.) The story is a simple one. It consists only of showing one by one the arguments against Dave's success.

The family, Jewish East Enders, believe the country to be the fatal in itself. Libby Dobson, inside and the outside of a rustic Dave's mucker in the RAF, has deserted Socialism and, in his order.

## St. John's, Smith Square

# Alfred Brendel

by DAVID MURRAY

Monday's BBC Lunchtime Recital was largely taken up by Schubert's expansive A major Sonata D 959, though the pieces Brendel chose to preface it to make an encore were not negligible. The latter was a little Hungarian Melody of Schubert's, unworriedly intensity, several degrees removed from mere declamation.

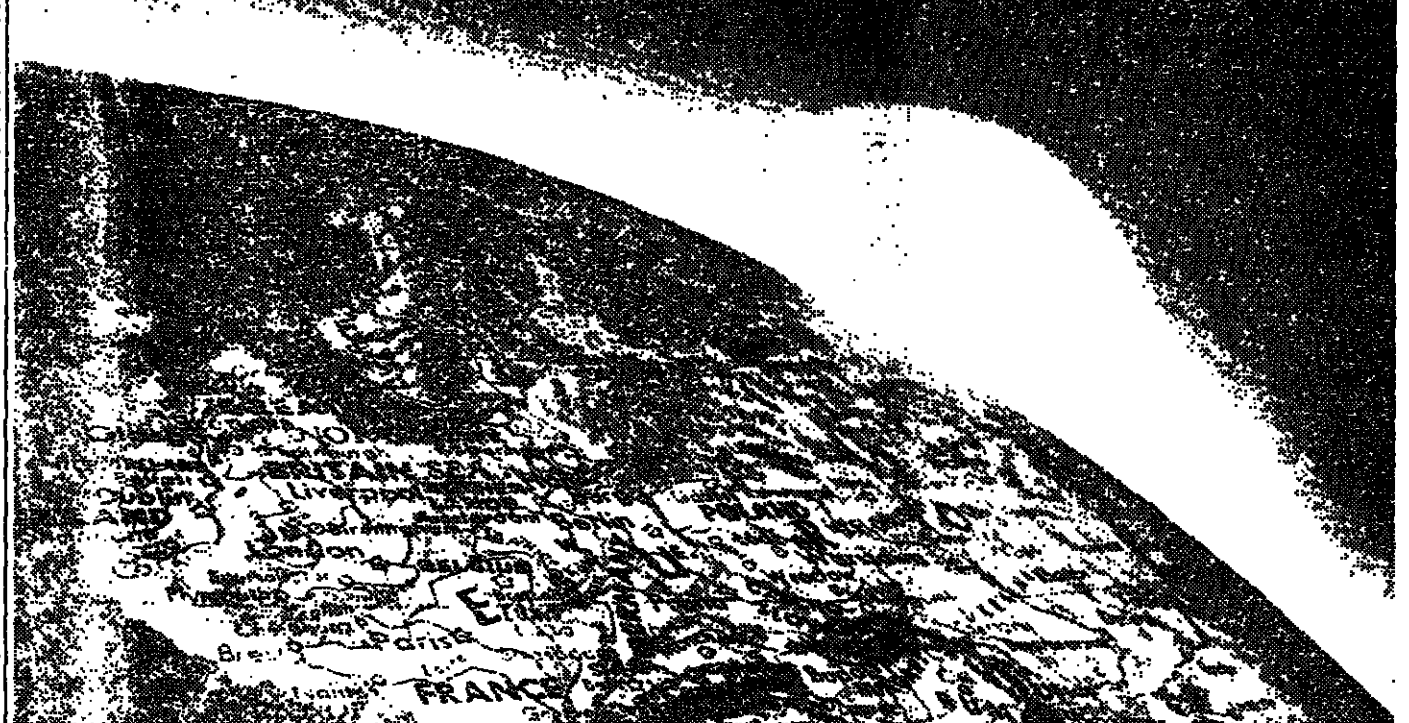
There was no sting in the Scherzo, but only playful glimmer and ingratiating humour. After that, fragile poignancy such as Walter Klien found in the Rondo a few weeks ago would not have been in place. Brendel invested it with broad warmth at a very relaxed Allegretto, an "Ende vom Lied" to conclude the imaginative excursions. The echo of the Allegro theme in the first bars was discreetly just that, not a firm official reminder. Altogether this was a performance as rewarding and lyrical as the continuing Schubert celebrations are likely to bring us. It can be heard on Radio 3 (VHF) trickling quaver descent ushered only this Saturday at 1.10 p.m.

One half expected the same stern tenderness in the Schubert Sonata, but Brendel offered something quite different. The opening statement was flung out urgently and freely, and then the trickling quaver descent ushered only this Saturday at 1.10 p.m.

The Arts Council's annual anthology of short stories, *New Stories 3*, is now available (hardback: £9.95, paperback: £2.25).

After the favourable reception given to the two previous short story anthologies the Arts Council has published its third Robert Fumival, Giles Gordon and Laurence Lerner.

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OTHER INTERNATIONAL BRANCHES

## Festival Hall

# Narciso Yepes

by NICHOLAS KENYON

Narciso Yepes visited the Festival Hall on Monday for his only recital this season in London. He devoted the second half of the concert to the music of Fernando Sor, the bicentenary of whose birth falls this year. Sor led an evidently fascinating career, travelling from his native Spain to Paris, London, Berlin, Warsaw, Moscow and St. Petersburg before settling in Paris for the last decade of his life. His remains, too, are of great interest (they include the unique account of a Mass at Monserrat during which a Haydn symphony was played). Sor's activities have recently been chronicled in great detail by Brian Jeffrey in his fine book *Fernando Sor. Composer and Guitarist* (from Tecla Editions, Preachers Court, London: EC1M 6AS).

I have to confess, however, that in comparison with Sor's music, Czerny's piano exercises sound like the deepest outpourings of the human spirit. Facile would be too positive a word with which to describe Sor's composing technique; this year's other centenary, Vivaldi, has

## Philharmonia's young soloists

The last two concerts of the Philharmonia's 1977-78 Royal Festival Hall season will be conducted by Andrew Davis, whose close association with the orchestra was highlighted recently when he stood in at short notice for Karl Böhm.

The concerts are remarkable for, among other things, the youth of the soloists.

On July 4 the soloist in Mozart's Piano Concerto in E major (K.459) will be the 21-year-old violinist Pierre-Laurent Aimard, making his London debut. Also included in the programme will be Schubert's Symphony No. 3, Messiaen's *Quatuor*, and Ravel's *2nd Daphnis and Chloe Suite*.

On July 13 the soloists in Strauss's *Don Quixote* will be Csaba Ardelyi (for the last four



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## The right MPs for Europe

WHEN the first direct elections to the European Parliament are finally held 12 months from now, it is important that they should be a success. It would be unfortunate if the new Parliament's credentials were to be open to doubt as a result of public apathy reflected in a low turnout at the polls. Candidates in the European elections will have a double task. In the first place, as in national elections, they will of course have to persuade the voters to elect them in preference to their opponents. In the second, however, they will also have to explain what the European Parliament is and the reasons why it should be taken seriously—whether they are pro- or anti-Market.

## Dynamism

This makes it all the more necessary that the candidates should be of a high calibre. The tendency under the present system of "indirect election" has been for national parties and parliaments in most of the nine member countries to nominate their more easily dispensable MPs to Strasbourg. There are, of course, honourable exceptions. Nevertheless, the introduction of direct elections will have failed in at least part of its purpose if it does not enhance the dynamism of the Parliament's members.

That may not be the main intention of the Labour Party sub-committee which this week voted to ban MPs from simultaneous membership of Westminster and the European Parliament under the so-called "dual mandate" system. It is, nevertheless, a welcome decision. If the European Parliament is to be a proper Parliament, it must be able to command the full-time loyalty of its members. The dual mandate already hampers the activities of the present Parliament, which meets no more than one week a month. The directly elected Parliament will almost certainly meet more often in full session, quite apart from the time-consuming business of committee meetings and travel between the Parliament's three centres—Strasbourg, Luxembourg and Brussels.

It would be almost physically impossible for a directly elected MP to do a good job in both the European and his national Parliament. There is also a political problem to which attention has

recently been drawn by Mr. Frank Allaun, a left-wing member of the Labour Party's National Executive Committee. He makes the perfectly reasonable point that the dual mandate would be unworkable "since an MP cannot represent one constituency of 500,000 people for the European Parliament and another of about 70,000 for the British one." Whether or not they share Mr. Allaun's views, the Conservatives are likely to adopt a similar position when they come to decide on the dual mandate in the near future.

Concern for the effectiveness of the European Parliament is not, of course, the main motive behind such thinking. Both of the major parties' minds have been focused on the issue by the imminence of a general election in Britain and the possible consequences of the dual mandate for their post-electoral fortunes at Westminster. The thought of snap votes in the Commons with up to 81 MPs away in Strasbourg, particularly if the election produced a hung Parliament, is a Whip's nightmare. But the prospect of a string of by-elections next June as sitting MPs defected to Europe is of equal concern. That option would also be ruled out by the Labour Party sub-committee's decision, which is expected to be endorsed by the National Executive Committee later this month.

## Salaries

If, however, there is to be no dual mandate, the issue of the European MPs' salaries becomes if anything even more delicate. There will be great resentment at Westminster if the European members are paid the huge (in British terms) sums earned by some of their continental colleagues. There will also be an outcry if they do not pay British income tax. The best answer is probably along the lines of the scheme currently under study in the Community which would provide the same basic salary for European MPs from all nine countries. There would then be additional, variable allowances to account for expenses and differences in national earnings rates. It is essential, however, that the pay should be high enough to attract talented politicians to the European Parliament. If that, in turn, led to pressure for an increase in British MPs' salaries, it would be no bad thing.

## New approach to London's roads

OF THE various factors that have contributed to the decline in industrial employment in London, the poor quality of the capital's road system may not have been the most important but its influence has certainly not been negligible. So it is welcome to find the Greater London Council fulfilling its role as strategic planning authority, saying that more must be done to remedy the most urgent deficiencies.

## Minimum

It is a pity that the need was not recognised earlier, for urban road building programmes have been the victims of particularly sharp swings in political fashion. In the first flush of enthusiasm for Professor Buchanan's ideas about transport and land use planning in the 1960s, a Labour-controlled GLC proposed an improved London road network based upon three concentric motorway rings. In principle, there was a lot to be said for the Buchanan concept of traffic corridors and environmental areas. But the economic cost was likely to be high, and the political and social repercussions were considerable.

Public and private developers in Victorian times may have been able to get away with grandiose schemes for new roads and urban redevelopment. But, in an age of popular democracy, changes in public attitudes can encourage politicians to believe that votes can be won by building roads in one year and by coming out against road building in another year. As a result, not only have the plans for motorway boxes been killed off and the routes no longer preserved, but London's road building budget has been cut to the barest minimum.

The scale of the cutbacks means that it will be some time before the new programme can be moved into gear. The GLC's London's employment prospects mainly lie in trying to slow down the loss of industrial jobs and encouraging more office and service activities. For both, a £420m in the two following quinquennia, with piecemeal

## Quality

In any case it is not only the controls on industrial development and London's high costs which have persuaded industrial firms to move elsewhere but the lack of physical space in which to expand and the shortages of skilled labour. It is hard to see how these problems can be made good for they reflect the desire by employers and employees alike to seek a better quality of life elsewhere. More sensitive planning policies may mean fewer small firms disappearing; and local initiatives, such as can be seen at Greenwich, may attract new ones. But before the new programme can be moved into gear, the GLC's London's employment prospects mainly lie in trying to slow down the loss of industrial jobs and encouraging more office and service activities. For both, a £420m in the two following quinquennia, with piecemeal

## The coming of the robot workplace

BY MAX WILKINSON

THE GOVERNMENT'S decision to risk a major investment in micro-electronics stems partly from the fear of a new industrial revolution which could fundamentally alter the relationship between capital and jobs.

Few now doubt that the integrated circuits pouring off the production lines in Japan and the U.S. at the rate of \$4bn worth a year will wreak a series of unpredictable changes throughout industry and society. The rate of change is arguable, but it is already clear that the new integrated circuit technology will bring an enormous increase in automation, industrial robots, and computer control. Even the slightly sinister phrase "artificial intelligence" is now beginning to have practical industrial implications.

In Japan, plans for a complete machine tool factory run entirely by robots and computers are already well advanced. The only humans involved would be in supervisory jobs, because even routine maintenance would be carried out by machines. Such factories would eliminate the jobs not merely of manual workers but of the complete spectrum of skilled operators.

Because of the huge capital costs, such completely automated factories may be slow to develop. However, the replacement of jobs by machines has already happened to a startling extent in some factories. In Southern Italy, for example, a computer system has been developed to run a refrigerated warehouse for 11,000 tonnes of ice cream. Only two operators are needed to work a system which can handle 100 pallets an hour for 15 hours a day and is capable of rotating the stock completely automatically.

Even in the mechanical assembly of small machines the developments of so-called artificial intelligence are likely to have an increasing impact. Mechanical arms are being linked by computer to a television type of camera which can "see" the work being assembled. International Business Machines, for example, has completed a four and a half year development of its "mechanical assembler project" which can put together eight parts of a typewriter in 45 seconds and is applicable to a wide range of similar industries.

Such examples abound. In Japan for example, it is estimated that some 70,000 industrial robots are currently in service, about a third of them in the motor car industry. They undertake quite complicated tasks like welding, machining and increasingly the assembly of mechanical parts.

Even in the UK which is relatively a laggard in this type of investment, computer control

of metalworking machinery and the automatic insertion of electronic components are becoming increasingly commonplace.

The integrated circuit technology which makes these developments possible undoubtedly has an element of black magic about it. Even engineers are often uncertain about how it works. Many people, including trade union leaders, are beginning to fear it, and to the majority of ordinary people the most factual descriptions sound incredible. At present circuits with up to 100,000 transistors can be etched onto a single slice of silicon less than the size of a postage stamp. By the middle of the 1980s it is expected that 5m to 10m components will be etched on a single chip.

This increase in complexity will, moreover be accompanied by a continuing fall in unit costs and an improvement in almost all aspects of the circuits' performance. The lowering of costs and increase in performance is, indeed, directly related to the reduction in size.

It is now commonplace to compare the influence of this new technology to that of the development of steam power in the late 19th century. Yet it is

cells per chip is still at an early stage.

It may not therefore be too late for a European government to make a determined entry into this new technology, although the risk is high and the amount of money required could be measured in hundreds of millions of pounds over a period of five years or so. The British Government now appears ready to spend around £100m, partly through support to companies already in the field and partly by setting up a new semiconductor subsidiary of the National Enterprise Board in co-operation with a group of American and expatriate British technologists.

The uncertainty of this venture can be judged from the fact that the Enterprise Board is currently talking about an investment of £20m to £30m. Some of its advisors talk about £50m and competitors like Philips and IIT believe an investment of £300m to £500m is necessary. Moreover, the Enterprise Board has been talking to the Government about the creation of some 4,000 jobs eventually. Given that the industry is currently turning over some £20,000 in sales per employee, the Enterprise

The Government's decision to back such a speculative project must therefore owe a great deal to its anxiety about the general strategic implications of micro-electronics for the rest of industry. If semi-conductors are going to reduce employment in the UK, it is argued, at least the UK must have a stake in the technology which will effect the change.

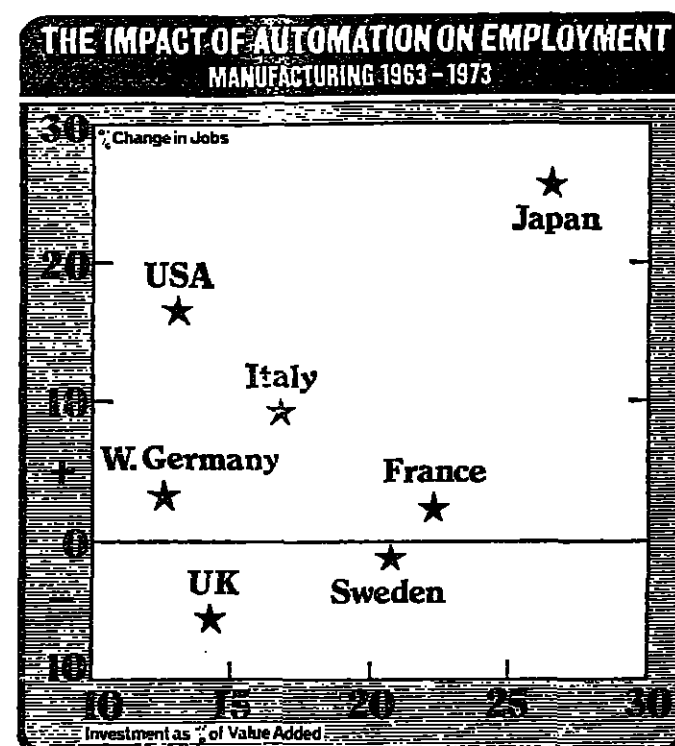
But will the application of computers and micro-electronics to industrial automation necessarily lead to a loss of jobs? This is a major uncertainty facing most of the industrialised nations, particularly in Europe. Some economists argue that the electronic revolution will result only in the speeding up of the process of automation which has been with us for 100 years. Mr. Simon Petch, deputy secretary to the Engineers and Managers Association, for example, says the new developments can be seen "not as something qualitatively different in kind from anything else that the economy has had to deal with but merely as an extension of some of the long term problems which we have had to consider for many years now."

In a similar vein, a confidential analysis by a senior former Treasury economist points out that historical evidence leads to the conclusion that investment in automation is linked to an overall increase in employment even though jobs in some industries decline. He says: "In the UK between 1960 and 1969 the total population rose by over four fifths and the working population nearly doubled. But the rise in employment fully kept pace and, so far as comparable estimates can be made, the proportion of unemployed fell slightly. This rise in employment was accompanied by a massive investment which resulted in a quadrupling of the capital stock of the country."

Obviously, such historical data must be treated with great caution, because it cannot allow for the radical change in the technological foundations of industry which is now taking place.

But the point remains: we cannot possibly foresee the mass markets of the future, any more than economists of the 1930s could predict, for example, the current sales of television sets, calculators or indeed the market for industrial robots.

Any attempt to achieve a general overview of the relationship between investment in machinery (with or without electronic control) and the creation of jobs is complicated by the almost complete lack of correlation between such investment and changes in manufacturing employment. The diagram shows in general that large investment in Japan has been associated with a big increase in employment while the reverse is the case in the



important to remember that micro-electronics is still in its infancy. After the invention of the transistor in 1947, it was not until the 1960s that techniques for connecting more than one transistor on a wafer became important. Simple micro-processors on a wafer started to appear at the beginning of this decade, but it is only in the last two years that the true micro-computer has been developed. Similarly the development of high capacity semiconductor memories with 64,000

Board's proposed subsidiary would have to achieve sales of some £80m a year. This is a truly formidable, though not impossible, objective.

A rapid penetration of the U.S. market with a narrow range of products including high density memories will be necessary; and this must be achieved against fierce competition from established companies like Intel, Fairchild, Mostek and the Japanese which are already well on the way to developing the next generation of products.

## MEN AND MATTERS

## New chairman for quiet market

The International CD Market Association is not a name on everybody's lips, but seeing that the London market in certificates of deposit totals no less than \$22bn its new chairman has obviously a fair measure of clout. David Potter of Credit Suisse-White Weld, who is aged 34, told me that he had "grown up" with the market since it was "very small, a mere billion dollars or two" in 1968.

Since then it has developed quietly, you might say inexorably. But it is only in the past two years that the Association itself has again begun to become representative of the major factors in the market. Before then, Potter explained, the vast majority of its members, had been London's traditional discount houses. Now, however, the "ethnic/geographic mix" is broader, with increasing participation of the investment banks and more commercially-oriented banks.

Potter told me that at first the Association had enforced tight rules on its members. Such rules had worried U.S. banks who feared they might be impeded from dealing with whomever they liked in whatever paper they chose. They were also fearful of anything which smacked of restrictive practice. Other sources say there was also a dispute over the margins then normal in Britain which were relatively high compared with those in New York.

Potter had been chairman of the Association's sub-committee concerned with broadening the Association and for the past two years has been dismantling anything which, he says, might have been seen as limiting freedom of the market. Recently Bankers' Trust International, Kuhn Loeb Lehman Brothers and A. G. Becker have joined the Association. What

about such major CD dealers as Salomon Brothers, Merrill Lynch and First Boston? I asked him. "They are actively considering joining us," he replied.

## Heavy joke

Two tons of coins and 15,000 one-cruzeiro notes spell revenge, or did so in Brazil this week. Sr. Pulo Francisco, a school owner, became incensed when a local car dealer refused to accept his cheque for the equivalent of \$4,446 for car repairs.

Setting out as if he were the standard bearer of all Brazilian cheque writers, he turned up the next day with the coins. 350,000 of them, and the notes. After three hours the car dealer had managed to count the equivalent of \$13.84 — and faced the prospect of 41 24-hour days before finishing wading through the tiny coins. "We accept it with good grace," the dealers now say, sighing collectively. "It is obviously a joke."

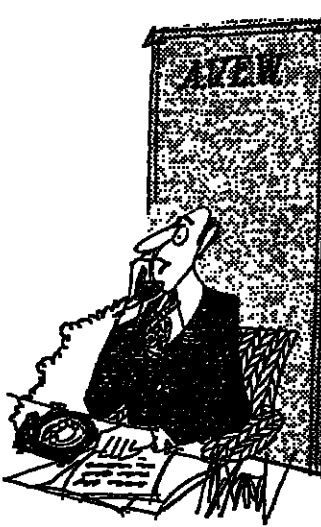
## Comradely chat

Edmund Dell and his eager colleagues at the Department of Trade might learn a thing or two from the new German-Russian foreign trade phrase book which has found its way to our hands. The 206-page book, which is to help East German negotiators, has an example or two which would hardly please our Ministers who are trying to persuade us our prices will stay stable.

Petrov: "I gather that your price has been raised 12 per cent. Based on the competitive offers we received we can only agree to a price increase of 8.9 per cent."

Kramer: "We have sounded out the main commodity markets. . . . We can also show you an offer from an English company."

The section on delivery dates has such standard phrases as



"Officially, yes—unofficially, no!"

"We will be unable to deliver a single machine in the first quarter"; that on delivery problems has a long dialogue on the freezing of the Black Sea and ore-loading difficulties at Murmansk.

That all does not always run smooth even between the best of comrades comes clear from the following: "Your reasoning is unclear and unconvincing."

"These prices must be rejected as a basis for further negotiations."

"Our figures do not agree with yours."

"I cannot make any further concessions."

But still all's well that ends well, or at least ends with the toast translated "To the enduring and inviolable friendship between our peoples."

## FO's mini

It is not every day that Britain establishes a completely new embassy, so the decision by the Foreign Office to appoint our first ever ambassador to Gabon is something of a diplomatic milestone—especially in view of

last year's report by Sir Kenneth Berrill's "Think Tank."

Until recently, Britain has taken only a modest interest in most of France's former colonies in West Africa, many of which are of limited economic and strategic significance and still accord a privileged position to their ties with Paris. Such relations as existed between the UK and Gabon have been handled through our embassy in neighbouring Cameroon. But Gabon's recent emergence as a newly rich oil exporter has prompted some rethinking in Whitehall. Politically, too, the country has acquired extra significance through its seat on the United Nations Security Council.

The new embassy will have only two diplomats and be modelled after the "mini-missions" which a number of smaller European countries have overseas. One question is whether such a post will be able to offer the consular services to which itinerant Britons have become accustomed. If it is a success, more mini-missions will follow.

The man chosen to become British Ambassador is Christopher Macrae. An able 41-year-old, he will be looking at Africa with a fresh eye. An expert on Arab affairs, he has spent the past two years seconded to the European Commission in Brussels, where he has worked on the Euro-Arab dialogue.

## Old times' sake

My colleague B. R. Ackenhouse was wending his way along Kensington High Street yesterday when he came upon four people cheering a woman hard at work in the midst of a window display of vacuum cleaners. Her weapons? A dustpan and brush.

Observer



Klann the Robot with Mr. Anthony Reichelt, director of Quasar Industries, who is demonstrating its "servant serving" capabilities.

UK. However, the widely reported commission by the dispersed relationship between investment and employment in the U.S. and Sweden, for example, shows only that it is difficult to make any generalisation about 30 per cent of their labour force over the next ten years.

In the UK, Mr. Agapayeff, chairman of Com Industries where investment puter Analysts and Programmers, one of the world's leading micro-computer software companies, believes an equally opening up new market sectors severe reduction in job opportunities is possible. He suggests that perhaps 1m jobs will be lost in manufacturing industries.

This is one reason why it is desirable for the UK to have a share in such a highly capital intensive field as the production of micro-electronics. Even if a UK company in this field made no profit, the support given to the computer, control and automation and even the office equipment industries could be enormous.

However, even if a new equilibrium is eventually reached between capital spending and the creation of jobs, it is likely that a period of severe upheaval will precede it in the shorter term.

The main reason is that it is difficult to see any major industry in the manufacturing sector which will be immune from the trend for the number of jobs to contract. Moreover, the office and secretarial jobs which have shown a steady increase for several decades will also be threatened by computers and micro-processors. Automatic typewriters, electronic communications, and large computer filing systems will all have their effect.

In Germany, which has the largest office population in West Europe and the highest degree of automation, a study by Siemens estimates that by 1990 about 40 per cent of present office work could be carried out automatically.

Similarly in France a recent severe problems."

## Punch

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# Brazil: headache after the miracle

By HUGH O'SHAUGHNESSY, in Sao Paulo.

A leading opponent of the Brazilian military Government, General Geisel, is very difficult to forecast the future in this country. We are either a step away from power or a step away from prison.

He had summed up the feeling of political and economic uncertainty which has invaded Brazil for the first time since the army seized power by a coup d'état in 1964. With the rapid fading of the Brazilian economic miracle the Government of General Ernesto Geisel has in the past few weeks suffered such a series of reverses that many Brazilians, commentators, politicians and businessmen alike, are prophesying that a big shake up in the largest Latin American country cannot be long delayed.

For nearly a decade the military ruled Brazil with little effective challenge to their will. After the coup the armed forces and police moved quickly to stifle political opposition, the old parties were wound up, and two new artificial creations, Arena, a supposedly pro-military grouping, and the Brazilian Democratic Movement, or MDB, a closely controlled, "opposition" group, were created to maintain a somewhat empty semblance of continuing democracy in a carefully circumscribed Congress in Brasilia.

## Faltering threat

Strikes were virtually banned and trade unions stripped of effective power while a faltering guerrilla threat was finally crushed by the end of the 1960s.

The early 1970s saw Brazil in the midst of a "miracle" with growth rates for a number of years in excess of 10 per cent

per annum. For once in its republican history the country appeared to be living up to its national motto, "order and progress." Loans and investments poured into Brazil from the U.S., Europe, and Japan in a greater atmosphere of euphoria than ever generated by any developing country. Roads were cut across the jungle, floods of cars issued from the factories of Sao Paulo, the world's fastest growing city, the military bought quantities of arms, and Brazil flexed the muscles of its diplomatic influence from Moscow and Brussels to Pretoria and Santo Domingo.

The higher echelons of Brazilian society enjoyed an undreamed of prosperity though very little of it trickled down to poorer Brazilians. But with the oil crisis of 1973 the economic picture was suddenly altered for a country which relied on imports for more than three-quarters of its petroleum. The increased oil bill placed a considerable strain on the balance of payments, which was only relieved by immense efforts to increase exports and attract yet more foreign capital. But now growth levels have fallen dramatically and popular discontent is increasingly being voiced.

In 1974 General Geisel took over the presidency for a five-year term pledging to judge Brazil back towards democracy. "Distensão" or political and social détente was his watchword. Since then however the tide of concern has been lapping ever more insistently around the Planalto, the remote presidential palace in Brasilia as President Geisel has tried to carry out a very delicate political task.

Now with President Geisel's term nearly complete and as his chosen successor, General Joao Baptista Figueiredo, prepare to

take over, the country seems suddenly plunged into a fit of uncertainty which has been deepened at a popular but none the less important level by Brazil's undistinguished showing so far in the World Cup. In the economic field, last month saw a massive but strictly orderly revolt by tens of thousands of metal workers in Sao Paulo against the continuing erosion of their living standards. Inflation is moving towards 45 or 50 per cent a year and wages remain controlled by Government decrees. Companies like Chrysler, Pirelli, Philips, Volkswagen and Mercedes, unused to demands from the workforce, were caught nearly as unaware as was the Government.

## Eroded wages

Neither employers nor officials could dismiss the affair as political agitation because the strike leader, Sr. Luis Inacio da Silva, universally known as "Lula," was careful to keep radical students or Sao Paulo's fringe of communists and Trotskyites away from the stoppage. It was clear to all that the factory workers were not stopping work to do honour to Marx, Lenin, or anyone else, but because they were no longer prepared to tolerate a system in which real wages were constantly eroded by comparison with management salaries and company profits.

Although the Government eventually had the stoppage officially declared illegal it was shown to be powerless in the face of the determination of the Sao Paulo workers. One by one the individual managements are now coming to agreements with their workers and offering state of Sao Paulo came together in the city to choose their candidate for State Governor. General Geisel had



A cordial handshake from President Geisel for his chosen successor, General Figueiredo, but the successor remains controversial even among the military.

difficult to see how Government labour legislation will ever have its old authority again. At the same time Lula and his supporters have shown that a strike does not necessarily mean terror in the streets.

The second and political blow to the Government was also delivered from Sao Paulo. Just over a week ago delegates from the branches of the normally docile Arena from all over the state of Sao Paulo came together in the city to choose their candidate for State Governor. General Geisel had

indicated that he wanted Sr. Government was faced not with Laudo Natel, an experienced and utterly safe politician, to be ratified by the delegates. Instead, they chose a colourful and highly controversial figure of Lebanese extraction, Sr. Paulo Salim Maluf, whose previous forays into politics and the world of finance were part of local folklore.

Though a fire mysteriously broke out as the delegates voted he was being counted Sr. Maluf was declared the winner by a take over the Sao Paulo majority. This time the

a duly elected candidate," one local editor commented to me. The revolt of the Arena delegates is widely seen in Brazil as the clearest manifestation yet of popular weariness with a military Government whose paternalism has become all the more unacceptable as it is shown to be faltering, fallible and distant.

General Geisel's problems are now made worse by unmistakable signs of unrest within the armed forces. He has rarely consulted senior officers about major decisions, including the selection of General Figueiredo as next president. A number of middle ranking officers have in recent months been disciplined because of their public complaints about Government decisions, but that has evidently not stilled military discontent. Some dissidents claim that they are in touch with one another daily by military radio throughout the country.

But at army headquarters in Brasilia, familiarly known as Fort Apache, General Hugo Abreu, a senior officer close to General Geisel, is known to be extremely unhappy about the choice of a rough hewn cavalry officer like General Figueiredo. General Figueiredo's own remarks have appeared at times singularly ill-judged. In a recent Press interview for instance he referred to the inhabitants of the cattle lands of southern Brazil as "gilgols for cows." To add to General Geisel's headaches, the powerful Catholic Church is pressing for a better distribution of wealth. President Carter's insistent pressure for more respect for human rights together with his opposition to Brazil's nuclear deal with Germany (or any other facility which could help give the Brazilian military a nuclear weapon) also weigh heavily on him.

His only respite has been the inability of the opposition to agree on a candidate to oppose General Figueiredo in the presidential election to be held by the electoral college in Brasilia in November.

The MDB, itself as heterogeneous a body as Arena, is toying with two prospective candidates: General Euler Bentes Monteiro, a retired officer reputedly of nationalist sympathies and hostile to excessive foreign control of the economy, and Senator Jose de Magalhaes Pinto, an aged but astute politician, formerly a pillar of Arena.

## Small share

In the last instance, however, the question of personalities is secondary. General Geisel is faced with a country of 110m people who are showing clear signs of being tired with the military, and who want to tilt the economic and political balance away from the minorities that have so far enjoyed a disproportionate share of the newly generated wealth and in favour of that majority that has been getting by on a relatively small share of the cake.

Since Brazil is the developing country with the largest outstanding foreign debt, currently estimated at around \$35bn and where many western banks are very deeply committed indeed, any marked change of direction will be of more than local interest. In the coming months the eyes of many of the world's international bankers will be on General Geisel as he tries to steer a course between handing over power to his political opponents—a thing he does not want to do—and putting them in prison—a thing a military government in Brazil dares attempt any more.

## Letters to the Editor

### Tax on minding the baby

From Mrs. Jacqueline Riley

Sir—I have been most interested to read recent reports of the attempts being made by a long range of journalists to bring tax relief on the baby-sitting expenses she necessarily incurs in the course of pursuing her career. As a working wife and mother who necessarily employs a living-in-nanny and a once-a-week daily help, I have long considered making a similar claim myself.

As matters stand I have to pay both my employees' wages out of income taxed at the highest marginal rate of income tax, and that income is again subject to tax and national insurance before I receive my hands. Were I to give up my hard-won career, three more people would be added to the register of unemployed to become a charge on the state and the useful contribution which I believe I am making to society would be doubly lost.

The passing of legislation to ensure equality of opportunity and pay to women seems ludicrous when the financial, physical and social strains of married women wishing to make use of their education and to take advantage of the increasing opportunities now open to them is so enormous.

If the presence of a person to mind the telephone in an office is considered an allowable expense, then I can see no reason why the presence of a person to mind the baby for precisely the same reason should not also be an allowable expense. Jacqueline Riley, 3, Clifton Road, N22.

### Linguistic crutches

From Mr. J. L. McKenna

Sir—Mr. Duncan Neil Dewar's cry for a movement to kick away the conversational crutches of the masses (letter June 12) stimulates me to suggest that it is time for a linguistic paraplegic to stand up and be counted.

For too long we have accepted the role of second class speakers, brutally aware of our verbal incapacities and—especially conscious of the curse of certain regional accents (mine being particularly nasal). Speak out fellow sufferers who needs the Queen's English anyway? J. L. McKenna, 66, Warrington Drive, Penn, Warrington.

### Sewerage and water charges

From Mr. R. W. Thirkell

Sir—I was glad to see that Mr. Gilliland, director of finance of the Thames Water Authority, had written to you (June 6) following my letter (May 27) but did not send his letter in the least bit helpful. Whether or not the Thames Water Authority, which I referred was unhelpful, was a matter of opinion, but there is certainly no doubt as to whether it was unhelpful. Mr. Gilliland's reasons given for the increase in sewerage charges are forced to the conclusion that both the landfill and

the letter were designed to deceive the reader.

The figures I quoted in my letter which Mr. Gilliland apparently accepts as correct) and calculations I have made relating to other London boroughs, lead to the conclusion that the average increase in charges for private dwellings for 1978-79 is probably of the order of 12 per cent for sewerage services and 16 per cent for water supply. Yet Mr. Gilliland quotes an average increase of 7.2 per cent and a Thames Water publication refers to average increases of 4 per cent for sewerage services and 10 per cent for water supply.

Water publication refers to average increases of 4 per cent for sewerage services and 10 per cent for water supply. I should be most grateful if the differences between the level of these figures and those I have provided could be explained. Incidentally, in case it is thought that many householders will be paying less for their Thames Water services in 1978-79, may I point out that for only very few households indeed will the total charges have been reduced. For example, in the boroughs of Enfield and Camden the rateable value needs to be above £1,212 and £2,000 respectively for a reduction in charges to take place. R. W. Thirkell, 3, Clifton Road, N22.

### Non-verbal language

From Mr. Clifford Jackson

Sir—May I write to commend Mr. Ron Campbell on his thoughtful and perceptive article, "The personality of a team" (June 7)? He makes several fundamental points of vital importance for ensuring the performance of British top management; and, in so doing, demonstrates that the successful manager has developed an understanding of what psychologists have laboriously established by painstaking experiment.

For instance, he mentions the importance of "non-verbal cues" (such as posture, expression of face, gesture and posture) in communication between people. How many errors would be avoided if those who gave instructions realised that they need to check that the recipient has put upon what may seem perfectly plain and straightforward to the speaker? How many misunderstandings and even strikes could be averted if more managers made sure that those who were going to be affected by decisions understood the pros and cons of alternative courses of action, and the reasons for the course of action ultimately decided?

Incidentally, his mention of "non-verbal cues" draws attention to one of the skills which all who are faced with the task of selection would do well to study and to develop. His differentiation between "No. 1s" and "No. 2s" should also be borne in mind during selection on first appointments on promotion. The perspicacious manager and his consultant should consider possible changes in the organisational structure to make sure that company objectives are achieved without incurring unnecessary interpersonal conflict being incompatibly placed between "No. 1s" and "No. 2s." Indeed, the task of the selector is to try to predict the performance of a given individual in a given work situation. The work situation includes not only the mental and physical tasks which need to be performed, but also the inter-

personal relationships which need to be handled, and the ambience of individuals who constitute the social mix within the company and its immediate environs of suppliers, customers and neighbours.

In my experience as an erstwhile industrial psychologist and managing director of a manufacturing company, I have noticed that an awareness of non-verbal cues and the interpretation of the attitudes and motivations which they reveal, both within the candidate and among those with whom he will be most closely involved, has a marked effect on the proportion of successful placements. Clifford Jackson, Director, Paul R. Ray International, 25, Old Burlington Street, W1.

### Board room politics

From Mr. R. A. Cole

Sir—Mr. Webb-Bowen (June 9) castigates British top management for two alleged failings: being political time-servers and not having introduced the two-tier board system. He offers no evidence in support of either reproach.

It might be expected that, as Managing Director of an Executive Search Organisation, he would be aware of the large number of board appointments which are now made using outside consultancy services. It must surely be assumed that this represents an honest attempt to date that candidate most fitted for the job. A further large number of appointments are made by promoting successful senior managers from within companies. Why does Mr. Webb-Bowen assume that the latter have "generally" become conditioned not to rock the boat by introducing new ideas? In 23 years in industry, I have found directors and managers generally responsive to new ideas, if they can be shown to work.

As for the Germanic two-tier board system (not "Continental" as the Latin countries do not use them)—why is Mr. Webb-Bowen so convinced that this is the answer for the U.K. with our very different tradition? Why, for example, is this better than the U.S. system of more independent outside directors, with real power through board committees? He claims that: "The advantage of the two-tier board system is that it allows the shareholder to draw upon a wide spectrum of outside knowledge and experience by appointing to the supervisory board non-executive directors from outside." Shareholders in the UK, and even more in the U.S., do this now with a unitary board. The two-tier board is, as he says, well adapted to absorb "wise directors," but he gives no reason to think that this is beneficial. As for his suggestion that "the two-tier board system would in any case be imposed upon us by the EEC soon enough," since less than half the members of the EEC use the system, including only one of the big four, this seems unlikely.

The danger of this sort of self-condemnation outbreak on behalf of British directors is that people may come to believe it. There is surely sufficient evidence to show that our society as a whole is sick, not just our economy or industry. Furthermore, this is not just a UK phenomenon; it affects virtually all the developed free world. Our industrial problems reflect the problems in society; they are no more the fault of managers than of educators, politicians and union

organisers. No more—and probably no less, but it ill behoves a managing director to assume guilt on behalf of his fellows, whether or not he accepts a share of the guilt for himself. B. A. Cole, "Drake Wood," Denonside Ave., Amersham, Bucks.

### The number of unions

From the Chairman, Advisory, Conciliation and Arbitration Service

Sir—May I make one brief point on Mr. Lyons' letter in your issue of June 9?

In dealing with trade union recognition claims a distinction has to be made between situations where only one union is making a claim and no other union is affected, and situations where a claim is being made by a union to enter an existing framework of negotiations embracing other unions. Mr. Lyons fails to make this distinction. This is the crux of the difference between us. J. E. Mortimer, Cleland House, Page Street, W1.

### Commemorative issues

From Mr. W. F. Richardson

Sir—It may be true, as your correspondent, Mr. David G. Thomas, states (June 3) that the London stock exchange is issuing commemorative medals may be due to the poor design. I do not think that this is the sole reason, however. In recent years, we have seen a spate of commemorative issues. And the same applies to stamps. The issuers have emphasised, only too often, the value of these as investments. They have quoted examples of a couple of coins 250 cent examples of appreciating items. What they have carefully ignored is the fact that these medals have appreciated in value, not because of their medallion interest, but because the price of gold, and to a lesser extent, silver, has risen in value.

It is true that a gold medal issued twenty years or so ago is now worth several times its issue price. But these can be purchased virtually at the cost of the gold content. Anyone who purchased gold articles at the same time will have done as well or better.

Even so, another factor usually ignored is that there are two prices—a buying price and a selling price, a 50 per cent difference is not unusual. Thus, to get his money back, a purchaser has to obtain a 50 per cent increase in nominal terms plus whatever depreciation reduces the unit value of the currency by four years. A £100 purchase, therefore, made in 1974, sold today, would need to realise £300. And this ignores other expenses such as insurance. Finally, when the Royal Mint perpetrates a confidence trick on collectors by issuing a proof silver jubilee crown, which could only be supplied after several months' wait, a year ago, and is still issuing it a year after the jubilee, who is going to trust it again? When is the issue going to cease? This year, next year, some time never. Is it surprising that the public is becoming wary? W. F. Richardson, 34 Queen's Drive, Fulwood, Preston, Lancs.

## Today's Events

### GENERAL

Balance of payments current account and overseas trade figures (May).

President Nicolas Coussereau of Romania in Downing Street talks with Mr. James Callaghan, Prime Minister. This evening the President is guest of honour at City of London dinner, Guildhall, E.C.3.

Statement expected at European Parliament, Strasbourg, by Mr. Finn Olav Gundelach, EEC Agricultural and Fisheries Commissioner, on outcome of fisheries policy talks with Mr. John Silkin, UK Minister of Agriculture.

TUC economic committee meets.

OECD Ministerial Council two-day session opens, Paris.

GLC to consider plan to revitalise London docklands with the creation of a 300-acre free trade zone for manufacturing exports. Inter-Governmental Maritime Consultative Organisation conference of some 60 nations meet in

London to discuss seamen's training and certification.

Further meeting between Fire Brigades Union and employers.

Fourth of seven fortnightly Indian gold auctions.

Publication of report of expenditure committee of National Land Fund.

Second day of international conference in Brussels to talk on economic aid to Zaire.

Sir Keith Joseph, Opposition Spokesman on Industry, is guest speaker at American Chamber of Commerce luncheon, Savoy Hotel, W.C.2, 1 pm.

Lord Thomson of Fleet at Press Association members' annual luncheon, Savoy Hotel, 1 pm.

NALGO conference continues, Brighton.

Annual report of Sir David McNee, Commissioner, Metropolitan Police.

### PARLIAMENTARY BUSINESS

House of Commons: Debate on Opposition motion on the economy.

House of Lords: Internationally Protected Persons Bill, third reading. Wales Bill, committee stage.

Rating (Disabled Persons) Bill, second reading. Local Government (Amendment) Bill, second reading.

Select Committees: Expenditure, Trade and Industry sub-committee. Subject: Measures to prevent collisions and strandings of tonnage cargo carriers in waters around the UK. Witnesses: Oil Alan Marre, Commissioner for Companies International Marine Forum, International Chamber of Shipping (10.30 am Room 10).

Nationalised Industries Sub-committee "B". Subject: Future of the electricity supply industry. Witness: Mr. David Penhalligon, NP 1045 (Room 8).

Unopposed Private Bill Committee on Tamar Bridge Bill (4 pm Room 9). Expenditure, Social Services and Employment Sub-committee. Subject: Employment and Training. Witnesses: Treasury Department of Employment, Manpower Services Commission (4 pm Room 13). Public Accounts. Subject: Appropriation Accounts 1976-77. Witnesses: Department of Environment, Stationery Office (4 pm Room 16). Joint Committee on Consolidation etc. Bills. Further consideration of Statute Law (Repeals) Bill (Lords) (4.30 pm Room 4). Parliamentary Commissioner for Administration (Ombudsman). Subject: Parliamentary Commissioner for Administration (Review of Access and Administration). Witness: Sir Alan Marre, Commissioner for Companies International Marine Forum, International Chamber of Shipping (10.30 am Room 10).

COMPANY RESULTS

Compair (half year), Robertsons Foods (full year), Westland Aircraft (half year).

COMPANY MEETINGS

See Page 23.

## The R-range from Redifon

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## INTERNATIONAL FINANCIAL AND COMPANY NEWS

## NORTH AMERICAN NEWS

## Basic Resources expects break-through next year

BY OUR FINANCIAL STAFF

AN INCREASED loss of \$3.4m the loss incurred by COFACE, an agency of the French Government, was reported for last year by agency of the French Government Basic Resources International.

The Rubelsanto venture, a subsidiary of the parent company whose subsidiaries operate in oil and gas exploration in Guatemala, aims to be the president, Mr. John D. at an initial output of 8,500 Park, anticipates a "sizeable cash barrels a day. Proven petroleum flow" in the second quarter of 1979.

## Eaton buys into Cutler-Hammer

BY JOHN WYLES

NEW YORK, June 13.

EATON CORPORATION has stepped into the intricate battle for control of Cutler-Hammer with a \$115.8m purchase of the Milwaukee-based electronics company's common stock.

This holding, which amounts to a 32 per cent stake, has been bought from Tyco Laboratories, a small New Hampshire manufacturing company—which has been a tenuous buyer of Cutler-Hammer stock since last November.

Financed by large bank borrowings and more recently by a \$25m Eurodollar issue, Tyco appeared bent on a takeover of Cutler-Hammer after the larger company stepped in to thwart Tyco's move to control Leeds and Northrup, a precision instrument maker. Cutler-Hammer stepped in as Leeds and Northrup's

"white knight" and eventually acquired 33.5 per cent of the company after Tyco capitulated by selling its holdings.

As many analysts suspected, control of Leeds and Northrup still appears to be Tyco's objective. Eaton has agreed that if it acquires a majority of the 68 per cent of the Cutler-Hammer stock it does not own then "it will, so far as it is legally able and subject to agreement between Cutler-Hammer and Leeds and Northrup, cause Cutler-Hammer to sell all of its holdings of common stock of Leeds and Northrup to Tyco."

Tyco has spent more than \$80m building up its holdings in Cutler-Hammer and it said today that its profits on the deal with Eaton amounted to \$5m "after provisions for recoverable profits and taxes." Eaton paid \$55 a

## Currency gain lifts Seagram

By Our Own Correspondent

MONTREAL, June 13.

SEAGRAM COMPANY, the world's largest distiller and based in Montreal, earned US \$22.3m or 64 cents a share in the fiscal third quarter, against US \$18.6m or 54 cents a share a year earlier, after pre-tax foreign exchange gains of \$2.6m, against \$1.2m. Sales were \$533m against \$536m.

Nine months earnings were \$62.3m or \$1.78 a share, against \$65.7m or \$1.87 per share, on sales of \$1.7bn, against \$1.6bn. An exchange loss of \$1.2m against a gain of \$7.7m is included.

## Kennecott delay

Kennecott announced that its annual meeting, which was adjourned to June 14 to allow for a vote count in the Curtiss-Wright proxy fight, had been further postponed to June 28 because the vote tally had not yet been completed, David Lascelles reports from New York.

## Offer for Interpool

Interpool's Board today recommended acceptance of Thyssen-Bornemisze's tender offer, reports AP-DJ from New York. The company said Thyssen's present plans are to make a tender offer for all Interpool common shares at \$40 cash per share. Under the terms of an agreement reached last March, Thyssen is obliged to make a tender offer no later than August 1, 1978, if the acquisition is not consummated in some other way prior to that date.

## Chicago Bridge offer

Chicago Bridge and Iron Co. is to make a cash tender offer through its subsidiary CBI Industries for all outstanding common stock of Rowan Companies, at \$26 per share. CBI Industries currently holds 4.9 per cent of the 10.1m outstanding shares of Rowan. CBI Industries said that the proposed offer would be conditional upon favourable action by the Civil Aeronautics Board with respect to transfer of control of Rowan's air taxi operations. AP-DJ reports from Chicago.

## Las Vegas casino owner in Atlantic City deal

BY OUR OWN CORRESPONDENT

NEW YORK, June 13.

ONE OF the largest U.S. gambling concerns, Caesar's World, which operates the Caesar's Palace Casino in Las Vegas, has enlarged its stake in Atlantic City, New Jersey, the resort which recently became the only town outside Nevada to have legal gambling. Caesar's World has taken a

long term lease with a purchase option on the Howard Johnson-Regency Hotel in Atlantic City, with an initial annual payment of \$1.5m. The company will spend about \$30m refurbishing the property and transforming it into a \$2,000 sq ft casino. Caesar's already has an option to develop a hotel casino on the former Traymore Hotel site.

## Whirlpool sales rising

BENTON HARBOR, June 13.

WHIRLPOOL CORPORATION'S sales for the first five months of 1978 were more than 17 per cent ahead of the year-earlier pace, "but we don't think this level is sustainable," Mr. John H. Platts, the chairman and chief executive told reporters.

He believes, however, that the appliance maker will post a sales increase, "in excess of 8 per cent to 10 per cent" for all of 1978, and said Whirlpool will continue to outperform the industry for the balance of 1978. Whirlpool had 1977 sales of \$1.94bn. The strong sales gains will cer-

tainly push second-quarter profit above the year-earlier level when the company earned \$27.7m or 78 cents a share on sales of \$507.6m. But he declined to make specific earnings forecasts for either the second quarter or all of 1978.

While a "significant slowdown" is not expected, he said that Whirlpool's analysis of consumer income and debt levels and other economic factors indicates that some sales growth will taper off this year, both for the company and the overall appliance industry.

AP-DJ

## Bache buys own shares

NEW YORK, June 13.

BACHE GROUP would not comment on published reports that the company is a potential takeover candidate.

Bache, the parent of Bache Halsey Stuart Shields, said earlier it purchased 489,300 of its common shares in a private transaction at \$10.25 each. A Bache spokesman said later the shares were bought from a group of shareholders in Chicago that has had "a substantial policy difference with the company."

Over the past 48 hours the secondary market has been very quiet with no changes in prices. Investors are still cautious, preferring to keep their money in term deposits so long as they fear interest rates might move up further.

## HUSKY OIL

BY ROBERT GIBBENS

THE American-based multinational oil company, Occidental Petroleum, headed by the legendary Dr. Armand Hammer, is making a counter-bid against Petro-Canada for control of Husky Oil of Calgary—itsself controlled by U.S. citizens.

Occidental's terms value the offer at U.S.\$444m.

Petro-Canada is the two-year-old Canadian national oil company.

Last night, Occidental disclosed plans to make a share exchange offer for 80 per cent or more of the Husky Oil stock outstanding. Husky shareholders would get new Occidental Preferred shares, cumulative U.S.\$100 par and carrying a dividend of U.S.\$10 or U.S.\$7.50.

About 90 per cent of the new stock would carry the higher dividend, and 10 per cent the lower rate, but the latter would be convertible into Occidental common stock at a premium of about 16 per cent. At present market values, each Husky stockholder would get 0.402 of a non-convertible Preferred share of U.S. \$100 par value, or a convertible Preferred share each share now held of Husky.

Husky shares were trading at C\$35½ when trading was started on the Canadian exchanges last Thursday.

The management of Husky owns about 20 per cent of the nearly 11m Husky common shares outstanding. They say they will accept the Occidental offer themselves, and recommend it to other shareholders.

Early on Monday, after several days of rumours, Petro-Canada said it would make an offer for all Husky shares, but without stating a price. Talks were held on Saturday between Husky and Petro-Canada in Calgary.

However, Husky later revealed that the Petro-Canada offer was C\$45 a share and the Husky directors were given 48 hours to accept.

Husky directors say they prefer the Occidental offer "because shareholders would participate in the equity of the combined company and in the potential appreciation from joint development."

The yield available would be better under the Occidental offer for technical reasons. More than 65 per cent of Husky shareholders are U.S. residents. The Occidental share offer would be made by U.S. banks and subject to Canadian and U.S. Government approvals.

It requires 80 per cent acceptance. The share exchange would be free of U.S. income taxes for U.S. holders and would represent a proposal to show that a takeover by Occidental is not a takeover by Occidental.

Both companies had been exploring ways of combining their resources "for some time." Canadian Occidental was a subsidiary of Occidental Petroleum of California, and Husky was a subsidiary of Occidental Petroleum of Canada.

Occidental also says it would merge its existing Canadian subsidiary into Husky if the offer goes through, allowing further Canadian participation.

In Calgary, Petro-Canada would say only that it will "review its position."

Earlier in Ottawa, Energy Minister, Mr. Alastair Gillespie, said it was "in the national interest and within the competence of the government" for Petro-Canada to take over Husky Oil.

But later a spokesman for Mr. Gillespie said he wondered if Occidental Petroleum had considered the Federal Government's Foreign Investment Review Board in bidding against Petro-Canada for Husky.

The FIRA Act requires a company to show that a takeover is in the national interest.

## Bankers in European study

BY DAVID LASCELLES

NEW YORK, June 13.

EIGHT OF the dozen largest U.S. banks have commissioned a major study of corporate banking in Western Europe in order to assess both their standing there and ways of improving it. The study is to be carried out by the Louis Harris Organisation, and will involve interviews with 500 companies in 10 countries, as well as with several dozen U.S. companies with European subsidiaries, and European companies with U.S. subsidiaries.

According to the Louis Harris Organisation, the survey has several principal aims. First, it seeks to establish market shares. Although U.S. banks have a fair idea of their standing in the market, based on their own feedback, they are keen for an objective assessment based on a wider sampling. The survey also aims to assess the participating banks' image and standing in Europe, to learn

which aspects of their performance are criticised and which to cut rates further. Their main interest, therefore, lies in establishing where the strongest demand for banking services lies, and how these services can best be offered, given that there is usually little to choose between the services available at different banks.

But while some banks are looking for ways to expand their activities in Europe, others are understood to be treating the survey as a holding operation to help them preserve their market shares and standing for the time being.

The Louis Harris Organisation would not identify the participating banks by name, but said they included eight of the 12 largest in the U.S. The banks will be paying \$25,000 each for the survey, which will take at least five months to complete.

## American Host and Derrick

NEW YORK, June 13.

AMERICAN Host and Derrick reports a cut in net income for the 26 weeks ended May 27 from \$8.5m to \$5.6m, or from \$1.35 per share fully diluted to \$0.92. Sales rose from \$189m to \$202m. For the 10 weeks to May 27, net income was down from \$4.07m to \$3.1m, or from \$0.67 to \$0.51 per share fully diluted, on sales of \$94.5m to \$88.5m.

The company said that earnings in the past 10 weeks were adversely affected by product development expenses that were higher than normal, and by unfavourable operating results from the Brazilian subsidiary. Meanwhile, the textiles unit, Collins and Akman, reports an increase in per share earnings from 51 cents to 58 cents for the first quarter. Agencies

SELECTED EURODOLLAR BOND PRICES  
MID-DAY INDICATIONS

Bid	Offer	Bid	Offer
Alcan Australia 8 1/2pc 1989	96 1/2	Alcan Australia 8 1/2pc 1989	96 1/2
AMEV 8 1/2pc 1987	96 1/2	AMEV 8 1/2pc 1987	96 1/2
Australia 8 1/2pc 1985	96 1/2	Australia 8 1/2pc 1985	96 1/2
Australian M. & S. 8 1/2pc '92	96 1/2	Australian M. & S. 8 1/2pc '92	96 1/2
Barclays Bank 8 1/2pc 1992	96 1/2	Barclays Bank 8 1/2pc 1992	96 1/2
Bentley 8 1/2pc 1987	96 1/2	Bentley 8 1/2pc 1987	96 1/2
Can. Nat. Railway 8 1/2pc 1985	96 1/2	Can. Nat. Railway 8 1/2pc 1985	96 1/2
Credit National 8 1/2pc 1988	96 1/2	Credit National 8 1/2pc 1988	96 1/2
Deutsche 8 1/2pc 1984	96 1/2	Deutsche 8 1/2pc 1984	96 1/2
ECS 8 1/2pc 1992	96 1/2	ECS 8 1/2pc 1992	96 1/2
ECS 8 1/2pc 1997	96 1/2	ECS 8 1/2pc 1997	96 1/2
ETB 8 1/2pc 1985	96 1/2	ETB 8 1/2pc 1985	96 1/2
Exim 8 1/2pc 1988	96 1/2	Exim 8 1/2pc 1988	96 1/2
Gl. Lakes Paper 8 1/2pc 1984	96 1/2	Gl. Lakes Paper 8 1/2pc 1984	96 1/2
Hamamky 8 1/2pc 1982	96 1/2	Hamamky 8 1/2pc 1982	96 1/2
Indra Quebec 8 1/2pc 1985	96 1/2	Indra Quebec 8 1/2pc 1985	96 1/2
ICI 8 1/2pc 1987	96 1/2	ICI 8 1/2pc 1987	96 1/2
158 Canada 8 1/2pc 1992	96 1/2	158 Canada 8 1/2pc 1992	96 1/2
Macmillan Bledel 8 1/2pc '92	96 1/2	Macmillan Bledel 8 1/2pc '92	96 1/2
Massey Ferguson 8 1/2pc '91	96 1/2	Massey Ferguson 8 1/2pc '91	96 1/2
MEC 8 1/2pc 1987	96 1/2	MEC 8 1/2pc 1987	96 1/2
Midland Int. Fin. 8 1/2pc '87	96 1/2	Midland Int. Fin. 8 1/2pc '87	96 1/2
National Coal Bd. 8 1/2pc 1987	96 1/2	National Coal Bd. 8 1/2pc 1987	96 1/2
National Westminster 8 1/2pc '86	96 1/2	National Westminster 8 1/2pc '86	96 1/2
Nat. Westminster 8 1/2pc '86	96 1/2	Nat. Westminster 8 1/2pc '86	96 1/2
New Brunswick 8 1/2pc 1984	96 1/2	New Brunswick 8 1/2pc 1984	96 1/2
New Brunswick 8 1/2pc 1984	96 1/2	New Brunswick 8 1/2pc 1984	96 1/2
Norfolk Inv. Bk. 8 1/2pc 1982	96 1/2	Norfolk Inv. Bk. 8 1/2pc 1982	96 1/2
Norpipe 8 1/2pc 1989	96 1/2	Norpipe 8 1/2pc 1989	96 1/2
Norsk Bydro 8 1/2pc 1985	96 1/2	Norsk Bydro 8 1/2pc 1985	96 1/2

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SINGAPORE BRANCH

U.S. \$20,000,000

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AGENT BANK  
MORGAN GUARANTY TRUST COMPANY OF NEW YORK  
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June 14, 1978.

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13th June, 1978

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# State releases part of Manufrance aid package

BY DAVID WHITE

PARIS, June 13.

THE FRENCH Government has granted a temporary reprieve in the form of loan funds for Manufrance. But the future of the company, whose losses have soared over the last three years to more than FF100m (\$22m) in 1977, is still far from guaranteed.

M. René Monory, the Economy Minister, has agreed to release between FF5m and FF8m of a FF20m loan conditionally earmarked for the company from the Government's economic and Social Development Fund.

The decision was greeted with satisfaction by M. François Gadoct, chief who took over in March as chairman of Manufrance, despite the restrictive nature of the Government's concession and the fact that no mention was made of further FF20m he wants to borrow.

The loan will, however, serve to alleviate Manufrance's immediate payments difficulties, while the authorities are to interfere with a pool of banks which have been blocking payments worth an estimated FF38m. It is also taken as token endorsement of the company's restructuring plan which includes making over a tenth of the workforce redundant.

Out of a workforce which over the past three years has dropped by a quarter to just under 3,000, 334 are to lose their jobs and another 30 retired early.

The restructuring plan, approved by a majority of shareholders involves setting up a holding company and dividing the group's operations into three separate parts—its shooting publication "Le Chasseur Français" mail order and retail activities and manufacturing which is mainly of small arms and bicycles. The company has also pledged to renegotiate some

social benefits judged exorbitant by the Ministry.

The success of the plan now depends on finding a private sector partner or partners ready to make a firm commitment to boosting Manufrance's finances.

The re-organisation of the Group's activities has run into the formidable opposition of M. Joseph Sanguedolce Communist mayor of Saint-Etienne. The town is the biggest shareholder with a stake of around 30 per cent and two of the six seats on the board. The Communist led CGT union estimates that, including a large number of small sub-contractors Manufrance is responsible for 15,000 jobs in the area.

M. Sanguedolce was also hostile to the outcome of the chairman's meeting with the economy Minister. The funds released, he said, would only serve to prevent the company dying straight away.

## ASEA to acquire Sao Paulo Electric

By William Dullforce

STOCKHOLM, June 13.

ASEA, the Swedish heavy electrical engineering and nuclear power group, is taking over the Sao Paulo Electric motor operations of the Brazilian company ARNO SA.

The purchase forms part of ASEA's plan to reorganise its activities in Brazil, where it is bidding for a Sfr 2bn (\$425m) contract for the high-tension transmission network linked to the giant Itaipu hydro-electric project.

ASEA had a 38 per cent stake in ARNO, which it sold to Electrolux at the beginning of the year. ARNO was producing many products, such as electric household equipment, which were outside ASEA's interests but fitted much better into the Electrolux range.

Now ASEA has bought out, for an undisclosed price, that part of ARNO which suits it and has the opportunity to develop electric motor production in a way it could not do as a minority shareholder in ARNO. The motor operations will be merged with ASEA Industrial SA.

The capital stock of this company and ASEA's other Brazilian Company ASEA Electrica SA, which makes transformers, will be owned by a new holding company, ASEA Participacoes.

## Swiss bond issues slow

By Our Financial Staff

THE BOND timetable for the domestic market in Switzerland for the third quarter of this year suggests that a significant slowdown in new issue activity is about to take place.

New borrowing in the July-August period will raise just Sfr1.1bn (\$530m) or very nearly 40 per cent less than the calls made on the bond market during the third quarter of 1977. The current, second quarter is due to raise Sfr1.2bn.

Taking in the traditional summer lull, the third quarter is invariably a quieter period for the financial markets. Even so it is clear that the increasingly liquid Swiss investing institutions and local yield levels unattractive. For eight and nine year paper, average yields are 31 per cent for blue-chip borrowers.

## PROSPECTS AT PHILIPS

# A host of golden variables

BY BILL COCHRANE

BACK IN mid-April, the 1977 annual report from Philips, the Dutch-based multinational electrical group, disclosed that the West German stake in its equity had risen from 8.8 per cent to 14.8 per cent over the year. The question, then and now, was whether this German initiative was clever money, patient money, or both.

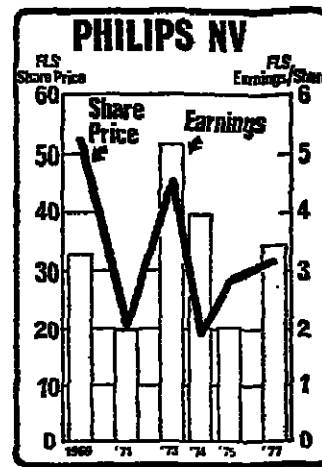
The Commerzbank, one of Germany's "Big Three" commercial banks as well as one of the slice of net disposable capital, had the impression that the money was both clever and patient. An impressive strength of the guilders was one reason why sales rose by only 2.2 per cent to Fls31.16bn in April. Fls25.70 in May and Fls26.60 last night. There may seem little joy for the enthusiasts there but our enthusiasts, remember, is a patient man.

● Currency swings: with only a quarter of gross deliveries in the Netherlands last year, the relation of strength of the guilder was one reason why sales rose by only 2.2 per cent to Fls31.16bn in April. Fls25.70 in May and Fls26.60 last night. There may seem little joy for the enthusiasts there but our enthusiasts, remember, is a patient man.

● Productivity: Philips presents as a whole, it sees volume growth of 7 to 8 per cent this year. But with a lot of flat areas in the commercial and industrial sectors, the overall sales picture is not particularly inspiring. We must remember to be patient.

● Financial management: in 1977, stocks as a percentage of sales were 29.6 per cent. Philips is acutely aware that an improvement of five percentage points would wipe out its debt—and that net interest charges accounted for slightly more than one third of profits before tax and interest last year. It also acknowledges, however, that the quality of information from the centre outwards will have to match that from the production lines inwards, before any such improvement is possible.

The ultimate variable, however, is the 1978 earnings forecast itself: "... it will be a great challenge..." said Philips "to achieve a substantial improvement in profitability." And that means at net level. However, it is the word "substantial" that leaves room for hope. In its benign multinational role, Philips has rejected maximisation of profit but neither is it keen on minimisation, and it stays on record as aiming for a minimum 4 per cent return on sales against the 2.2 per cent of 1977. There are new arrivals on the Board of directors, side observers reckon that they VCRs (though video-cassette have both the will and the ability to achieve the 4 per cent while, for the colour TV industry target.



## Higher premium inflow for Austrian insurers

BY PAUL LENDVAY

VIENNA, June 13.

ERSTE ALLGEMEINE, the leading Austrian insurance company, reports a 14.4 per cent rise in premiums to Sch 6.26bn (€1418m) in 1977.

Direct business in Austria accounted for Sch 2.19bn. The company is involved in insurance business in West Germany, Holland and Switzerland and is also engaged in reinsurance. An unchanged dividend of 10 per cent is proposed.

However, the higher than average rise in premiums was accompanied by a steep rise in damages, particularly in car insurance. Total expenditure was Sch 3.5bn, with the car sector accounting for Sch 1.2bn.

Fire insurance business improved on the results for 1976 but in West Germany, the company experienced setbacks. House insurance premiums in Austria were up from Sch 348m to Sch 376m. The company decided to increase basic capital by Sch 20m to Sch 270m.

Another Austrian insurance company, Interunfall, has announced an unchanged dividend for 1977 of 10 per cent on its Sch 100m capital. Net profit was

Premiums rose last year by 10.3 per cent to Sch 2.7bn, with income in Austria up by 11.8 per cent and in West Germany by 7.2 per cent. Operating revenues increased from Sch 137m to Sch 149m. Interunfall raised its total resources to Sch 251m by allocating Sch 20m to investment reserves and Sch 22m to free reserves. The car sector accounted for half of the premium income.

Anglo-Elementar increased its premium income by 4.2 per cent to Sch 1.4bn last year. Domestic business expanded by 6.1 per cent. Losses were registered in car, industrial fire and household insurance business.

Interest income was up by 19 per cent to Sch 188m. After the allocation of Sch 24m to the reserves, and Sch 37.5m to investment, net profit was Sch 7.8m.

An unchanged dividend of 10 per cent and a 2 per cent bonus (same) is announced, on the Sch 60m basic capital. The company is owned by West Germany's Allianz Versicherung, which took over 86 per cent of the capital last year from Com-Sch 100m capital. Net profit was

## Gain at Condotte d'Acqua

ROME, June 13.

CONDOTTE D'ACQUA, the Italian State-owned engineering group, recorded net profits of L1.2bn (\$1.1m) for 1977 up from L976m the previous year.

Turnover amounted to L41.2bn, a 44 per cent rise on 1976. The company will pay a L32 dividend, L2 more per share than the previous year.

The Board has already announced plans for an increase in capital to L24.5bn from L17bn. Condotte d'Acqua intends also to launch a convertible bond issue of L14bn.

Meanwhile, Compagnia di Navigazione Alta Italia (NAI) announced a balance sheet loss of L24.9bn (\$21.3bn) for 1977 against a no profit-no loss balance the previous year.

NAI has decided to cover L11.4bn of the shortfall by drawing funds from special reserves and to put the remaining loss on the new balance sheet.

It blamed the continuing world shipping crisis, depressed freights and heavy financial burdens on borrowed money for the severe 1977 deficit.

The shipping concern said that by the end of 1977, its indebtedness amounted to L184.2bn of which L133.8bn was medium and long-term and the balance short-term.

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## \$150m 'club' loan for Austria

BY FRANCIS GHILIS

IN A "club" deal with nine banks (Creditanstalt Bankverein, Girozentrale, Österreichische Landesbank and Genossenschaftsbank of Austria, together with Credit Lyonnais, Deutsche Genossenschaftsbank, Amsterdamsche Bank, Sumitomo and First Chicago) the Republic of Austria has raised \$150m for 12 years, with five years grace, on a split spread of 1 per cent for the first 10 years, rising to 1 per cent.

These very fine terms did not please all banks; some of which refused to participate, but overall there was no problem—in fact, quite the reverse. The

amount raised by the Republic could have been increased with ease. Spanish borrowers remain active: Enpetrol, the INI controlling oil company, is raising \$40m for ten years with four years grace on a split spread of 1 per cent throughout. No guarantee has been provided to the four banks which are arranging this deal—Chase Manhattan, Deutsche Bank, Manufacturers Hanover and Bankers Trust International.

Another Spanish borrower raising money is Instituto de Crédito Oficial. West Deutsche Landesbank has been mandated

to arrange a \$150m loan for ten years with four years grace on a split of 1 per cent, for the first four years rising to 1 per cent for the remainder.

On the southern Mediterranean shores, Algeria continues to be a very active raiser of funds. Gulf International Bank has just been mandated to raise \$100m at least for seven years on a split spread of 11 per cent for the first three years, rising to 13 per cent.

Three features of this operation are of interest. The majority of the banks in the management group are Arab institutions; the Arab Monetary Fund is present in a management group for the first time; and the borrower has agreed to a penalty clause for prepayment. This is likely to prove popular with banks because so many countries are taking advantage of soft market conditions prevailing today to prepay loans contracted in the past few years early and re-finance them on cheaper terms.

Algeria was noteworthy for resorting to this practice as far back as 1976. The inclusion of this clause in the contract has enabled the lead manager to improve on the terms it is able to offer Algeria: a spread of 11 per cent for part of the maturity is the best Algeria has obtained in the market in the present cycle.

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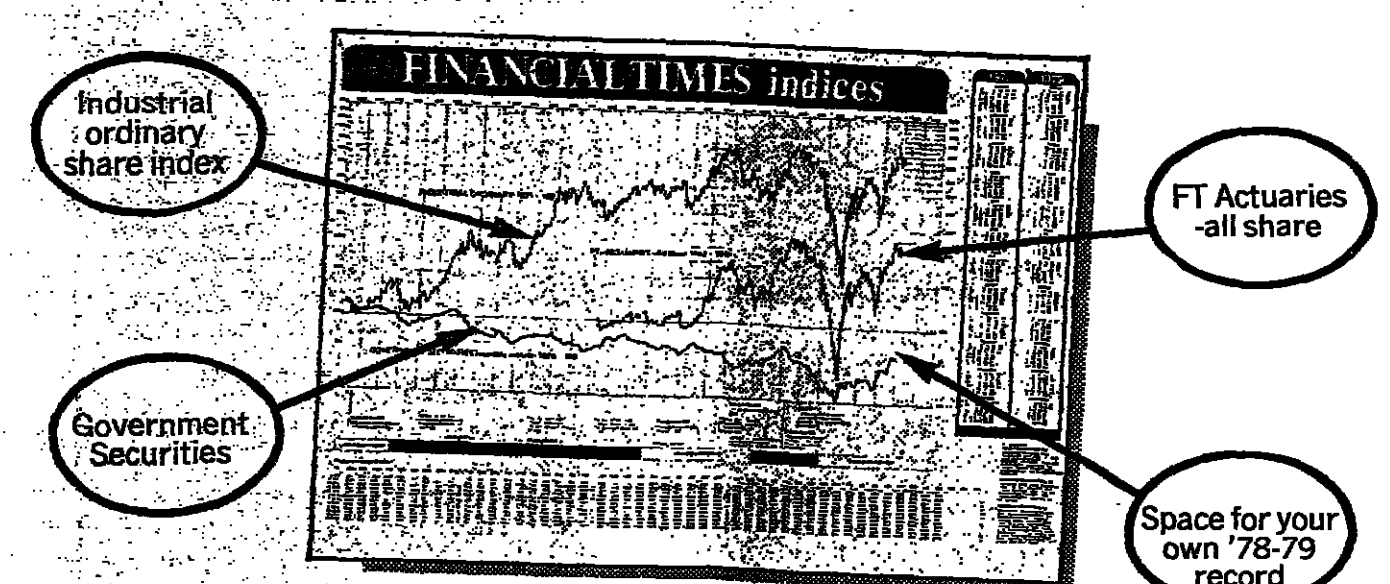
## America-Valor payment

BY JOHN WICKS

AMERICA-VALOR, an investment fund for U.S. securities administered by the Swiss Bank Corporation subsidiary Interfunds, is to remain at SwFr 12 for the year ended March 31, meaning a rise in dollar terms from \$4.72 to \$6.42. The fund, which also includes a small share of Canadian stock, booked profits of SwFr 0.91m for the year against SwFr 0.85m. Its portfolio value dropped from SwFr 31.8m to SwFr 24m and certificate circulation rose from 72,451 to 77,558 units.

Interfunds, an international portfolio fund administered by the same company, has cut its Swiss franc dividend from SwFr 2 to SwFr 1.90 for the year ended April 30. Nevertheless, this means a rise in dollar distribution from 79 to 98 cents per certificate. Net profits fell from SwFr 2.3m to SwFr 1.87m for the year, portfolio holdings from SwFr 76.7m to SwFr 65.3m and certificate circulation from 1.23m to 1.08m units.

# Three major market indicators at-a-glance with the new edition of the FINANCIAL TIMES indices wall-chart



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### NORTHERN ROCK BUILDING SOCIETY

## CHANGE OF INTEREST RATES

### INVESTMENTS

From July 1978 the rates of interest payable to existing and new investors will be increased to:

PREFERENCE SHARES	6.70	10.00
SAVINGS ACCOUNTS	6.70	10.00
PERSONAL DEPOSITS	6.45	9.63
SUBSCRIPTION SHARES (including 1.50% bonus)	7.95	11.87
S.A.Y.E. (NO CHANGE)	8.62	12.87
EXTRA INCOME SHARES		
2 YEARS	7.20	10.75
3 YEARS	7.70	11.49

Interest on all Discontinued Issues increased by 1.20%.

Maximum holding for each investor is £15,000 (joint investors £30,000).

\*This represents the gross equivalent yield to an investor who pays income tax at the basic rate of 33%.

### MORTGAGES

The rate of interest on all mortgages will be increased by 1.25% from 1st Aug. 1978. Individual notices quoting revised monthly instalments will be sent to all borrowers as soon as possible.

Saves a lot with

## Northern Rock

Countrywide Building Society

Authorised by the Financial Services Commission under the Building Societies Act 1962. Registered Office: 100, Old Broad Street, London EC2M 1JL. Telephone: 0632 557191.

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For use by Banker or Stockbroker claiming commission—

VAT Regn. No. \_\_\_\_\_ (if not registered put "NONE")

(Stamp)

THE LIST OF APPLICATIONS WILL BE OPENED AT 10 a.m. ON FRIDAY, 16th JUNE 1978 AND WILL BE CLOSED AT ANY TIME THEREAFTER ON THAT DAY

## 10 per cent Exchequer Stock, 1983

ISSUE OF £900,000,000 AT £95.00 PER CENT

TO THE GOVERNOR AND COMPANY OF THE BANK OF ENGLAND

The applicant named below requests you to allot to him/her in accordance with the terms of the prospectus dated 12th June 1978 a £

say \_\_\_\_\_ pounds of the above money raised to pay the instalments as they shall become due on any allotment that may be made in respect of this application, as provided by the said prospectus. The applicant requests that any letter of allotment in respect of the Stock allotted be sent to him/her by post at his/her risk.

The sum of £ \_\_\_\_\_ being the amount of the required deposit (namely 10 per cent of the sum applied for), is enclosed.

I/We declare that the applicant is not resident outside the Scheduled Territories and that the security is not being acquired by the applicant as the nominee of any person(s) resident outside those Territories.

June 1978 SIGNATURE \_\_\_\_\_ of, or on behalf of, applicant.

PLEASE USE BLOCK LETTERS

SURNAME OF APPLICANT \_\_\_\_\_

MR/MRS/MISS OR TITLE \_\_\_\_\_

FIRST NAME(S) IN FULL \_\_\_\_\_

ADDRESS IN FULL \_\_\_\_\_

a Applications for amounts up to £2,000 Stock must be in multiples of £100; applications for amounts between £2,000 and £50,000 Stock must be in multiples of £500; applications for more than £50,000 Stock must be in multiples of £1,000. Applications should be lodged at the Bank of England, New Issues(s), Watling Street, London, EC4M 9AA.

A separate cheque must accompany each application. Cheques should be made payable to "Bank of England" and crossed "Exchequer Stock".

If this declaration cannot be made it should be deleted and reference should be made to an Authorised Depositary or, in the Republic of Ireland, an Approved Agent, through whom lodgment should be effected. Authorised Depositaries are listed in the Bank of England's Notice EC 1 and include other banks and stockbrokers and solicitors practising in the United Kingdom, the Channel Islands or the Isle of Man; Approved Agents in the Republic of Ireland are defined in the Bank of England's Notice EC 10.

The Scheduled Territories at present comprise the United Kingdom, the Channel Islands, the Isle of Man, the Republic of Ireland and Gibraltar.



# INTERNATIONAL FINANCIAL AND COMPANY NEWS

## SOUTH AFRICAN INVESTMENT

### More freedom for the institutions

BY RICHARD ROLFE IN JOHANNESBURG

THE SOUTH AFRICAN Minister of Finance, Mr. Owen Horwood, has supplied additional stimulus to the convalescent domestic economy with a surprise move to increase the amount of discretionary funds in the hands of the financial institutions. The prescribed asset requirements which the financial institutions have to hold in Government and public corporation fixed interest stocks have been reduced by 2 per cent to 80 per cent and estimates suggest that about R350m (US\$400m) of funds at present invested in public debt can now be made available to the private sector.

This concession partly rolls back the demands made on the financial institutions—primarily the long-term insurers and pension funds, but also the building societies, short-term investors and the banks—in the Budgets of 1976 and 1977, when in an effort to meet financing needs without resorting to higher taxation, the Minister raised the prescribed asset requirement. It went up by 2 per cent in 1976 and 3 per cent in 1977, but was not touched in the 1978 Budget.

The effect of the 1976 and 1977 increases was felt most markedly in the industrial share market, where investment by the long-term insurers and pension funds became little more than a residual item. In 1978, the 10 per cent of these institutions' cash flow was invested in equities and the level was down to 8 per cent. In 1977 as the institutions sought to top up their holdings to the prescribed level.

Before the reduced requirement announced last week, the general expectation among fund managers was that institutional investment in equities

The cut in the prescribed asset requirements of the South African financial institutions announced last week has freed an estimated R350m for switching from the public sector to private at a time when the markets in both fixed interest stocks and industrial shares are strong. With turnover in equities running at about R15-20m a week, it can be argued that some R300m of additional funds likely to be ploughed primarily into equities this year will be absorbed only against the background of rising share prices—so that the additional R350m now available for private sector investment will not be switched rapidly out of gilts.

long-term Government (RSA) stock will be at 10.5 per cent compared with the peak last year of 11 per cent while the decline in the widely-traded Electricity Supply Commission (Escom) issues and municipal loan stocks has been even more pronounced, the latter falling from 13 per cent to just over 11 per cent.

Only a few weeks ago, the construction group Murray and Roberts raised 14-year money at 12.6 per cent and capital markets

sources believe another blue chip name could now raise long-term funds at under 12 per cent. This compares with the prime rate for bank borrowings of 12.5 per cent and suggests that the pressure is building up to lower the whole interest rate structure, although the recent rising trend of interest rates in the UK and U.S. will be an important constraint.

Even so, most fund managers believe the decline in domestic interest rates has not yet run its course and from this it follows that they will be reluctant sellers of their gilt and semi-gilt portfolios.

The timing of the reduced prescribed assets requirement coincides with a period when the financial institutions are voluntary buyers of Government stock and are effectively forcing interest rates down because of the stock shortage.

The fall in yields has been mirrored in the equity market where the average dividend yield has fallen from 11.9 per cent a year ago to 8.8 per cent this week with a number of leading in-

dustrial stocks standing at 50 per cent or more above their 1977 share price lows.

With turnover in equities running at about R15-20m a week including trade in De Beers and gold shares as well as industrial, it is clear that even the R300m of additional funds likely to be ploughed primarily into equities this year will only be absorbed against the background of rising share prices.

Hence the additional R350m now freed for private sector investment will not be switched rapidly out of gilts and semi-gilts, though its availability will probably underpin the industrial share market.

This leaves open the question of where ultimately the financial houses will invest the discretionary portion of their cash flows, now rising at a compound rate of 15 per cent. Property investment, whether directly into central business district projects or indirectly into leasebacks, is at a low ebb; there are few large loan stock issues in the pipeline; and there is no sign yet of an aggressive approach to equities. Direct investment in the next generation of mining projects, particularly where energy-related, may be one answer.

The R350m concession on prescribed asset holdings brings to R1.5bn the total of stimulatory measures announced in the past eight months, starting with the R500m of public expenditure on housing projects late last year.

Tax cuts in the budget added a further R300m, finance for the Budget deficit via the stabilisation fund another R250m-R300m and the relaxation of bank credit ceilings about R1.9 per cent. These moves have all provided a more confident climate.

## Volkscas boosts earnings and payout

By Richard Rolfe

JOHANNESBURG, June 13

FURTHER strength in banking profits in South Africa in the year to March is shown in the results from Volkscas, the third biggest South African bank, which has announced a rise in taxed profit from R15.2m to R16.8m (\$19.4m) after undisclosed transfers to reserve. Earnings per share rose from 70 cents to 78 cents and with a 1 cent rise in the final dividend to 12.5 cents, the dividend total for the year is up from 20 cents to 22 cents.

Last week Standard, the local arm of Standard Chartered, reported a return to growth in operating profits—up 42 per cent to R54.5m—and raised its dividend from 22.5 cents to 25 cents. Volkscas, which is a subsidiary of the Transvaal and has strong links with government, the municipalities and the public corporations, is the main Afrikaans banking institution—with the Rembrandt Group since last year being the biggest shareholder, though lacking Board representation.

Volkscas has acquired various industrial subsidiaries over the years, the recent performance of which has tended to offset strong profits growth by the banking interests. These industrial interests consist chiefly of Transvaalse Suiker Korporasie, a sugar producer, and TMR, an ingot and casting business. To these has recently been added control of the troubled industrial holding company Bomskor, in which Volkscas has 62 per cent and the operating arms of which include forestry, tea estates, and distribution of earthmoving equipment and motor cycles.

Despite Bomskor's subsidiary status, its results which showed a loss of R2.2m, have not been consolidated with the latest Volkscas accounts. The Volkscas Board, to cover the increasing diversity of its interests, has decided to establish a new "controlling company" in which similar interests on the industrial side will be grouped together and which will also hold the banking subsidiaries. Total group assets, it is disclosed, rose from R2.6bn to R2.9bn last year.

## Tooth raises its dividend

By James Forth

SYDNEY, June 13

TOOTH, the major New South Wales brewer, has raised its dividend after a 12 per cent increase in earnings for the year to April 1. Profit rose from A\$12.6m to A\$14.1m (US\$16m). The dividend is increased from 11.5 cents a share to 13 cents.

The higher profit was largely the result of an improved performance by its wine subsidiary, Penfolds, and the directors expect better results from this operation. Beer profits lagged but the Board is hopeful that the recently announced acquisition of Courage Breweries will enable the group to lift production to meet existing demand, and thus increase profits.

The profit increase lagged well behind the growth in sales, which rose 44 per cent to A\$228m (US\$258m).

## Stalemate in Conoco talks with Petronas of Malaysia

BY WONG SULONG

KUALA LUMPUR, June 13

THE ANNOUNCEMENT last week by Continental Oil Company (Conoco) that it is closing its office in Kuala Lumpur, confirms recent speculation that its negotiations on a production sharing agreement with the Malaysian oil company, Petronas, has reached deadlock.

After more than two years of unpublicised, but nevertheless tense negotiations, both sides show no sign of giving way. Conoco says that it is closing its office because the state of talks does not warrant the maintenance of such an office, but hastens to add it has not given up hope altogether of reaching an acceptable agreement with Petronas.

The dispute is centred on whether the Conoco field in the South China Sea is a profitable one. Conoco, and its two junior partners, El Paso of Texas and Australia's Broken Hill Proprietary (each with a 25 per cent interest in Conoco's Malaysian operations) were given a 24,000 sq. mile concession off the Pahang coast, 10 years ago.

In 1972 the consortium struck oil, and gas in an area known as Sotong, 120 miles from the coast. The strike appeared to be a very promising one with the rate of flow at 5,000 barrels a day. But after more thorough surveys, it was found that the field was rather small.

With the formation of Petronas in 1974, the concession system was abolished, and foreign oil companies were

required to enter into production sharing agreements with the Malaysian oil company.

After protracted negotiations, and much acrimonious argument, two foreign companies—Shell and Exxon—managed to sign a 20-year agreement with Petronas at the end of 1976, which gave them about 41 per cent of the oil produced.

The two companies are now in full swing with their exploration and production work and in Conoco Shell and its partner Mitsubishi concluded another agreement with Petronas to build a U.S.\$1bn liquid natural gas plant in Sarawak.

But the situation is different with the Conoco-El Paso-BHP consortium. Having found what it claims to be a marginal field, it wants a more attractive deal than was given to the two other companies. This has been flatly rejected by Petronas.

There are three main reasons for Petronas' tough stand. First, it does not believe that the Conoco field is profitable. There are claims that the Sotong area has about 20m barrels of recoverable oil. Petronas thinks that it has more than 50m barrels, as well as large deposits of gas.

It has told the consortium that if it is worried about losses, Petronas is prepared to participate in the venture so that if Sotong proves to be loss-making, Petronas would suffer as well. However, negotiations on this proposal failed, apparently because Petronas, among other things, demanded a 50 per cent share in the venture.

The Malaysian oil company is also disputing the consortium's claim that it had spent US\$100m on exploration work—money which it wants to recover from oil to be produced.

The second reason is that Petronas is in no hurry to exploit the Sotong field. Between Shell and Exxon, Malaysia is producing more than 200,000 barrels of oil daily, and output is expected to reach 400,000 barrels or more by 1983.

Malaysia is finding it difficult to absorb the extra petrodollars into the local economy without fueling inflation and pushing up the already very high liquidity among Malaysian banks. Oil revenue, therefore, is being invested overseas to shield the local economy from these effects.

Finally, there is a clause in the agreement with Exxon that there would be renegotiations should another company be granted a more favourable production sharing agreement.

"We are in no hurry to get the oil out," says a Petronas official. "Malaysia's oil reserves are not very large, and therefore we are giving serious thought to the conservation of this asset for as long as possible. Instead of pumping it quickly."

Within this context, even Conoco's argument that the long delay, coupled with the soaring cost of oil equipment, is undercutting the profitability of the Sotong field fails to convince Petronas of the need for an early settlement of the dispute.

## Tan Chong Motors optimistic

BY OUR OWN CORRESPONDENT

KUALA LUMPUR, June 13

TAN CHONG MOTORS, the Malaysian and Singapore assembler and distributor of Datsun cars, expresses optimism in its annual report that the strong profits of last year would be maintained in the current year as a result of the continued buoyancy of the Malaysian market.

Datuk Tan Yuet Foh, the chairman, says the bright outlook for the company's assembly plant outside Kuala Lumpur, is now working at full capacity and plans are under way to expand facilities to meet the increasing demand for Datsun cars.

Last year's pre-tax profits rose by 170 per cent to 30.2m ringgits (U.S.\$8.4m), with sales rising 61 per cent to 211m ringgits (U.S.\$55m). Car sales rose by 42 per cent to 9,600 units in Malaysia, while in Singapore there was a rise of over 200 per cent to 4,000 units.

The Singapore sales are expected to slow down, following the introduction of new car models, but the Malaysian side is seen as bright, with a Government action to dampen sales, although the rise in the yen could have some marginal effects.

Datuk Tan says that efforts are being made to diversify into distribution of machine tools, car spare parts and cosmetics, but of Sim's subsidiary, Consolidated plantations.

Tan Tan is the chairman of Datsun cars. The company is confident of maintaining the higher dividends it is paying this year.

United Malacca Estates Berhad, the plantation group controlled by the family of Tan Tan Siew Sin, has sold 1.29m of its 5.15m shares in Consolidated Plantations for 2.1m ringgits (US\$75,000). Wong Salong writes from Kuala Lumpur.

The sale will realise a profit of 1.5m ringgits, which will be shown in the results for the current year to April 30.

Tan Tan is the chairman of Datsun cars. The company is confident of maintaining the higher dividends it is paying this year.

## Haw Par sees profits in 1978

SINGAPORE, June 13

Haw Par Brothers International, which reported a reduced group net loss of S\$3.13m (US\$1.3m) for 1977, against a loss of S\$48.20m in 1976, expects to be in profit this year.

Although the first months of the year will be poor, as a result of marine division losses, there will be a pick-up later as such losses are reduced and other divisions improve, according to the company's annual report.

Every division of the group except the marine division produced profits last year, totalling S\$13.6m, compared with a loss of S\$9.3m previously, but the recovery in trading, textiles and pharmaceuticals was offset by the marine division's S\$11.2m loss (against a S\$1.1m loss in 1976).

A swing in extraordinary items from a loss of S\$35.64m in 1976 to a gain of S\$2.19m in 1977 played a major part in the improvement in the net figure.

The pre-tax loss was S\$2.34m, compared with S\$9.77m.

Haw Par said that steps have been taken to correct the marine division position, but it will not return to profit in the current market.

The Board's policy is to continue the profitable build-up of main operating divisions, expand into new products and areas and improve the rate of return on assets.

Reuter

## Petra Bank starts operations

BY RAMI G. KHOURI

AMMAN, June 13

THE THIRD new commercial bank licensed by the Central Bank during the past year with a joint shareholding between Jordanian and Gulf interests has opened its doors here.

The Petra Bank, with a subscribed capital of 3m Jordanian Dinars (\$9m) and a paid-up capital of J\$1m (US\$1m) opened its main branch in the centre of Amman. It aims to concentrate on short-term trade financing for the time being, according to its general manager, Dr. Ahmad Chalabi.

Dr. Chalabi also said, however, that Petra Bank plans to reach out soon into investment banking, trust management and project financing as well, both in Jordan and throughout the Arab world.

Petra Bank is also likely to promote more efficient retail banking throughout the traditional and conservative Jordanian banking system, as it is the first bank to introduce on-line computerised retail banking services in the country.

The bank is using a Burroughs B1500 computer system, which is also being considered by other banks in Jordan, according to officials of the computer company.

The Petra Bank's equity is held 60 per cent by Jordanians and 40 per cent by other Arab interests, notably Kuwaiti, Saudi Arabian and Abu Dhabi.

## ASEAN plans reinsurance venture

BY OUR OWN CORRESPONDENT

KUALA LUMPUR, June 13

THE newly-formed Insurance Council of the Association of Southeast Asian Nations (ASEAN) plans to set up an ASEAN reinsurance company to be financed jointly by insured companies in the ASEAN countries.

The president of the Malaysian Insurance Association, Mr. Taib Razak, said that such a project would cut down the large reinsurance company being amount of reinsurance that made, and member companies ASEAN insurance companies would review the proposal at its next meeting in Kuala Lumpur. In the case of Malaysia, a sum

of 60m ringgits in reinsurance money was placed overseas, principally in London, in 1976, 75m ringgits in 1977 and 87.5m ringgits last year, representing 21.5 per cent of gross premium income.

Mr. Taib, who is a vice-president of the ASEAN Insurance Council, said that a feasibility study on the ASEAN reinsurance company was being made, and member companies would review the proposal at its next meeting in Kuala Lumpur.

The profit increase lagged well behind the growth in sales, which rose 44 per cent to A\$228m (US\$258m).

## THE DREYFUS INTERCONTINENTAL INVESTMENT FUND N.V.

NOTICE OF ANNUAL GENERAL MEETING  
NOTICE IS HEREBY GIVEN that the Annual General Meeting of The Dreyfus Intercontinental Investment Fund N.V. ("The Fund") has been called by the Management and will take place at Handelskade 8, Willemstad, Curaçao, Netherlands Antilles on June 26, 1978 at 11.00 a.m.

- AGENDA
1. Consideration of a dividend.
  2. Approval of Financial Statements for the fiscal year ended August 31, 1977.
  3. Reduction of the Fund's authorised capital from 3,000,000 to 2,000,000 Shares.
  4. Related Business.

The foregoing items may be approved by a majority of the shares cast on each item. Copies of the Annual Report of the Fund containing the Financial Statements for the fiscal year ended August 31, 1977 and form of proxy—available in English or German without cost to the Shareholder—may be obtained from the principal office of The Dreyfus Intercontinental Investment Fund N.V., Post Office Box N3712, Nassau, N.P., Bahamas Islands, from the offices of the banks listed below, or from

Dreyfus GmbH  
Maximilianstr. 24  
8 Munich 22, West Germany  
Tel. 089/220702, Telex 5129392

Holders of bearer shares will be admitted to the Meeting on presentation of their Certificates or presentation of a voucher which may be obtained from any of the banks listed below.

Holders of bearer shares may vote by proxy by mailing a form of proxy and a voucher obtained from one of the banks listed below to Messrs. C. D. Lind and C. G. Smeets, The Dreyfus Intercontinental Investment Fund N.V., c/o Curaçao, International Trust Company N.V., P.O. Box 812, Willemstad, Curaçao, Netherlands Antilles. The form of proxy and voucher must be received by Messrs. Lind and Smeets by June 23, 1978 to be voted at the meeting.

Bowling Green Company Limited  
Managing Director

PAYING AGENTS FOR  
THE DREYFUS INTERCONTINENTAL INVESTMENT FUND N.V.

Morgan Grenfell & Co. Limited  
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Luxembourg

Deutsche Bank AG  
Grosse Gallusstr. 10-14  
6 Frankfurt/Main,  
West Germany

Montreal Trust Company  
15, King Street West,  
Toronto, Ontario,  
Canada

## MONTE DEI PASCHI DI SIENA

Bank founded in 1472

## financial highlights of our 506<sup>th</sup> year as of december 31, 1977

	(Billion Lira)	(Billion Pounds)
SAVINGS DEPOSITS AND CURRENT ACCOUNTS	5,772,288	3,479,5
BONDS OUTSTANDING	1,011,985	610,9
RESERVE FUNDS	331,442	199,8
TOTAL AVAILABLE FUNDS	8,614,127	5,192,6
LOANS AND ADVANCES	3,339,532	2,013,0
SECURITY HOLDINGS	2,627,682	1,583,9
NET PROFIT	7,579	4,6

## MONTE DEI PASCHI DI SIENA "GROUP"

MONTE DEI PASCHI DI SIENA

BANCA TOSCANA

CREDITO LOMBARDO

Total Deposits 11,996,653 7,230,9

Capital and Reserve funds 473,991 285,7

## BOARD OF DIRECTORS

Chairman, Giovanni Coda Nazzari;

Deputy Chairman, Sergio Simonelli;

Members, Mario Bernini; Alberto Brandani; Giovanni Buccianti;

Marcello De Cecco; Guastiero Della Lucilla; Fazio Fabbri.

## INTERNAL AUDITORS

Chairman, Renato Lughetti;

Members, Marco Baglioni; Carlo Luigi Turchi;

Alternates: Francesco Bisconti; Luigi Colaninoli.

## CHIEF EXECUTIVE AND CHIEF FINANCIAL MANAGER

Giovanni Cresti

## Our Eurobanking Services

### Off to a good start in 1977

We are the wholly-owned subsidiary of Badische Kommune Landesbank, one of Southwest Germany's leading banks headquartered in Mannheim. Our Eurobanking activities in Luxembourg started in July 1977, and good results were posted for the partial accounting year.

Highlights 77	(in DM million)
Balance sheet total	513
Due from banks	211
Securities	32
Credit volume	243
Due to banks	485
Capital	16

A business volume of DM 531 million was achieved. The surplus for the partial accounting year was transferred to reserves. As a result of this favorable development, the share capital was increased in January 1978 by DM 16 million to DM 32 million.

We concentrate our activities on short and medium-term Eurocredits and syndicated Euroloans, money market and foreign exchange operations, and security transactions. For more information about our Eurobanking services and a copy of our Annual Report, just contact:

BADISCHE  
KOMMUNALE LANDESBANK  
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25c Bd. Royal - P.O. Box 626 - Luxembourg-Ville  
Tel.: 475144, 475315 (dealers) - Telex: 1791, 1792 (dealers) - 1793 (credits)

هكذا من الأصل



# The Peugeot 604 TI - A Thoroughbred



The Peugeot 604 TI and the racehorse have many things in common. Poise, dignity and immaculate breeding are some of them. Speed, power and style are others.

But, whilst only the privileged few can afford to own a racehorse, the well-priced 604 TI is in reach of many. Unlike the racehorse which is rather a delicate creature, the car is tough and reliable as well as elegant. Tough and reliable because it's designed that way. For as befits a thoroughbred, only the best is good enough; highly skilled designers and engineers, first class materials, and the most advanced manufacturing technology all combine to produce this true thoroughbred.

The oversquare 2.7 litre V6 engine is built from lightweight aluminium, and has twin camshafts for maximum flexibility. The benefit of using lightweight materials is reflected in the excellent fuel consumption figures (33 mpg at a constant 56mph\*). Technically it's at the head of the field taking full advantage of the latest developments. The Bosch Jetronic fuel injection system accurately meters the fuel/air mixture to increase power and reduce

petrol consumption. The electronic ignition system ensures super smooth starting, and the 5-speed manual gearbox means even smoother, quieter, more economical driving, especially at high speeds. Or, for those who prefer, there's the option of a 3-speed automatic gearbox.

Comfort is naturally of the highest level and the specification of the 604 TI leaves little to be desired; 4 electrically operated windows, subtly tinted glass all round, electrically operated sunroof, power assisted steering, centralised pneumatic door locking system, rear fog lamps and a super deep lustre metallic paint finish to the body with a final coat of clear protective lacquer. The interior is as luxurious as you'd expect and where the 604 really scores is in its spaciousness. As Car magazine said, "rear leg room is almost to limousine standards."

The 604 SL (carburettor model) has always been competitively priced. The 604 TI, with fuel injection and other refinements, represents, at £7582, a first class investment.

And the 604 thoroughbred won't cost you a fortune to run. It's frugal with petrol as we've

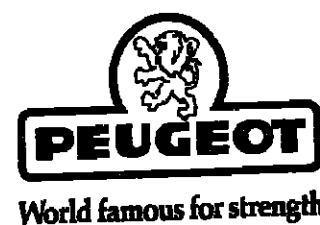
shown, but in addition it requires main servicing only once a year, or 10,000 miles (with intermediate check and oil change every 6 months or 5,000 miles). The 604 TI is also covered by Peugeot's straightforward 12 month, unlimited mileage guarantee, and first-class service is assured by our network of fully trained Dealers across the U.K.

Let us tell you more about our thoroughbred - send now for details on the 604.

Model	Manual 5 speed gearbox			Automatic gearbox		
	Constant 56mph	Constant 75mph	Simulated urban driving	Constant 50mph	Constant 75mph	Simulated urban driving
Fuel Consumption*	33.2 mpg (8.5 l/100 km)	26.1 mpg (10.8 l/100 km)	16.8 mpg (16.8 l/100 km)	27.4 mpg (10.2 l/100 km)	22.4 mpg (12.6 l/100 km)	16.7 mpg (16.9 l/100 km)
Price Inc. VAT & Car Tax, Delivery & No. Plates Extra	£7581.60	Leather seats, air conditioning £8522.28		£7903.35	Leather seats, air conditioning £8243.82	
		£8787.87				

\*In accordance with official government testing procedures. Prices correct at time of going to press. Clothes by Ted Lapidus. Racing stables C. Dingwall

Peugeot Automobiles (UK) Ltd., Peugeot House, 333 Western Avenue, London W3 0RS. Tel: 01-993 2331



World famous for strength

## 604, the best Peugeot in the world.



All of these securities having been sold, this announcement appears as a matter of record only.



# U.S. \$200,000,000 Province of Ontario (Canada)

New Issue / June, 1978.

Thirty Year 9 3/4% Debentures Due June 1, 2008

Principal and interest payable in The City of New York in lawful money of the United States of America.

Salomon Brothers

Wood Gundy Incorporated

McLeod Young Weir Incorporated

The First Boston Corporation

Merrill Lynch White Weld Capital Markets Group

A. E. Ames &amp; Co.

Dominion Securities Inc.

Atlantic Capital

Bache Halsey Stuart Shields

Bell, Gouinlock &amp; Company

Blyth Eastman Dillon &amp; Co.

Burns Fry and Timmins Inc.

Dillon, Read &amp; Co. Inc.

Drexel Burnham Lambert

Goldman, Sachs &amp; Co.

E. F. Hutton &amp; Company Inc.

Kidder, Peabody &amp; Co.

Lazard Frères &amp; Co.

Lehman Brothers Kuhn Loeb

Loeb Rhoades, Hornblower &amp; Co.

Nesbitt Thomson Securities, Inc.

Paine, Webber, Jackson &amp; Curtis

Richardson Securities, Inc.

Smith Barney, Harris Upham &amp; Co.

Union Bank of Switzerland (Securities) Limited

Warburg Paribas Becker

Dean Witter Reynolds Inc.

Greenshields &amp; Co Inc

Midland Doherty Inc.

Pitfield, Mackay &amp; Co., Inc.

This announcement appears as a matter of record only.

New Issue in Canada

Can. \$75,000,000

## Province of Saskatchewan

9 1/2% Debentures

(Semi-annual interest)

To be dated June 15, 1978

To mature June 15, 2003

Price: 99.00 and accrued interest to yield approximately 9.60%

Dominion Securities Limited

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## ROBINSON BROTHERS (RYDERS GREEN) LIMITED

Placing of 1,813,188 11 per cent Cumulative Preference Shares of £1 each at 109p per Share

SHARE CAPITAL

Authorised

£

1,000,000

2,000,000

2,000,000

5,000,000

Ordinary Shares of £1 each

11 per cent Cumulative Preference Shares of £1 each

Unclassified Shares of £1 each

Issued and Now Being Issued Fully Paid

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1,000,000

2,000,000

3,000,000

Application has been made to the Council of The Stock Exchange for the 2,000,000 11 per cent cumulative preference shares of £1 each in the capital of the company to be admitted to the Official List. In accordance with the requirements of the Council of The Stock Exchange 181,319 preference shares are available in the market on the date of publication of this advertisement.

Particulars are available in the Extel Statistical Service and copies may be obtained during usual business hours on any weekday (Saturdays excepted) up to and including 28th June 1978 from:

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## Currency, Money and Gold Markets

### \$ firm in Europe

Conditions in yesterday's foreign exchange remained very subdued throughout the day. The U.S. dollar showed a general improvement against other major currencies, apart from the Japanese yen. The dollar may have received a boost from U.S. Federal Reserve Board chairman G. William Miller's statement that the authorities were deeply committed to maintaining a stable and strong dollar. Nevertheless trading was extremely thin and the

before easing back at the finish to \$1.5335-1.5345, a loss of 40 points on the previous close. Frankfurt: The Bundesbank did not intervene at yesterday's exchange, although the dollar fell to DM 2.0807 from DM 2.0800 at the previous closing. The opening European rate was around DM 2.0810 and trading was very quiet with the dollar trading in narrow ranges. No new factors were influencing trading.

Tokyo: In hectic trading, the dollar closed at ¥222.55 against the yen having dipped to a post-war low of ¥216.20 at one point. The previous close was ¥219.47, and although there was a slight recovery in later trading, further pressure seemed likely with the opening of European centres. Intervention by the Bank of Japan was not apparent. Volume rose heavily in spot turnover to \$820m and \$354m in combined forward and swap trading. The authorities announced that trade figures for May due today would now be released on Friday. This gave rise to speculation that the authorities may be waiting a few days in the hope of calmer conditions in the foreign exchange market.

Paris: The dollar fell to FF 4.5970 at the close, from a high point of FF 4.5900 against the French franc in fairly calm trading. It was also weaker against Monday's closing level of FF 4.5930. The French franc was fairly steady against other major currencies, although the Swiss recovery in the FF 2.4300 from FF 2.4290 in the morning, and FF 2.4220 late on Monday. Sterling finished at FF 8.4550, compared with FF 8.4580 in the morning, and FF 8.4400 on Monday afternoon, while the D-mark rose to FF 2.2050 from DM 2.20475 in early trading, and FF 2.2030 previously.

The Japanese yen showed a much stronger tendency against the dollar mainly on fears of a further large trade surplus for May in Japan and closed at ¥216.75 from ¥217.70. The Swiss franc also eased in dollar terms to Sfr 1.5880 against Sfr 1.5890. Using Morgan Guaranty figures at noon in New York, the dollar's trade weighted average depreciation was unchanged at 3.8 per cent. Sterling spent a quiet day and its trade weighted index eased slightly to 61.4 from 61.5 having spent the rest of the day at 61.5. In terms of the dollar, the pound opened at \$1.5375-1.5385 and at \$1.5375, compared with \$1.5340-1.5350 on Monday.

Amsterdam: At the fixing the dollar was Fl 2.2303, compared with Fl 2.2345 on Monday.

London: The dollar remained weak, falling around against the lira at the fixing. Dollars traded amounted to 12.6m, most sold by the Bank of Italy. The U.S. currency fell to L.538.4, compared with L.537.9 at the fixing of L.538.4, but major European currencies tended to improve against the lira. The Swiss franc rose to L.434.84 from L.433.51, while the D-mark improved to L.412.95 from L.412.4.

At the fixing the dollar was £1 2.2303, compared with £1 2.2345 on Monday.

### THE POUND SPOT

June 13	Bank rate	Day's spread	Close
U.S. \$	1.5340-1.5345	1.5335-1.5340	1.5335
Canadian \$	1.2080-1.2085	1.2075-1.2080	1.2075
Swiss F	2.4300-2.4305	2.4295-2.4300	2.4295
Dutch G	16.35-16.40	16.30-16.35	16.30
French F	8.45-8.50	8.40-8.45	8.40
Italian L	193.5-194.0	193.0-193.5	193.0
Japanese ¥	222.5-223.0	222.0-222.5	222.5
Spanish Ptas	165.75-166.25	165.25-165.75	165.25
Portugal Esc	200.0-200.5	199.5-200.0	199.5
Belgian F	33.35-33.40	33.30-33.35	33.30
Austrian S	13.75-13.80	13.70-13.75	13.70
Swedish Kr	10.45-10.50	10.40-10.45	10.40
Scandinavian	10.45-10.50	10.40-10.45	10.40
U.S. cents per Canadian \$	72.5-73.0	72.0-72.5	72.5

### FORWARD AGAINST £

One month	% chg.	Three months	% chg.
1.55-1.56, dm	0.25	1.50-1.70, cpm	3.5
2.1-2.77, cpm	0.42	1.8-1.73, cpm	2.7
1.55-1.56, dm	0.25	1.50-1.70, cpm	3.5
1.14-1.16, dm	-0.76	1.05-1.10, dm	-1.9
416-24, 16 pf	0.41	24-24, 16 pf	0.0
15-103, 10 pf	0.27	10-10, 10 pf	0.0
10-10, 10 pf	-0.57	142-215, s	-9.0
2-116, 1 s	-0.57	24-24, 16 pf	0.0
1-10, 10 pf	0.42	1.8-1.73, cpm	2.7
1.14-1.16, dm	-0.76	1.05-1.10, dm	-1.9
1.55-1.56, dm	0.25	1.50-1.70, cpm	3.5
1.14-1.16, dm	-0.76	1.05-1.10, dm	-1.9
1.55-1.56, dm	0.25	1.50-1.70, cpm	3.5
1.14-1.16, dm	-0.76	1.05-1.10, dm	-1.9

### THE DOLLAR SPOT

June 13	Bank rate	Day's spread	Close
U.S. \$	1.5340-1.5345	1.5335-1.5340	1.5335
Canadian \$	1.2080-1.2085	1.2075-1.2080	1.2075
Swiss F	2.4300-2.4305	2.4295-2.4300	2.4295
Dutch G	16.35-16.40	16.30-16.35	16.30
French F	8.45-8.50	8.40-8.45	8.40
Italian L	193.5-194.0	193.0-193.5	193.0
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Austrian S	13.75-13.80	13.70-13.75	13.70
Swedish Kr	10.45-10.50	10.40-10.45	10.40
Scandinavian	10.45-10.50	10.40-10.45	10.40
U.S. cents per Canadian \$	72.5-73.0	72.0-72.5	72.5

### FORWARD AGAINST \$

	One month	Three months
0.05-0.05c dis	-0.25	0.85-0.85c dis
0.05-0.05c pm	3.89	2.66-2.66c pm
0-7c pm	2.83	22.5-2.5c pm
0.05-0.70p pm		2.25-2.53p pm
2.70-3.20lreds	-4.06	8.60-9.35lreds
3.77-4.87c dis	-2.25	2.30-2.50c dis
1.02-0.92p pm	5.93	2.05-2.80p pm
1.17-1.32c pm	6.82	3.20-1.23c pm

### CURRENCY RATES

June 13	Bank rate	Day's spread	Close
U.S. \$	1.5340-1.5345	1.5335-1.5340	1.5335
Canadian \$	1.2080-1.2085	1.2075-1.2080	1.2075
Swiss F	2.4300-2.4305	2.4295-2.4300	2.4295
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French F	8.45-8.50	8.40-8.45	8.40
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Swedish Kr	10.45-10.50	10.40-10.45	10.40
Scandinavian	10.45-10.50	10.40-10.45	10.40
U.S. cents per Canadian \$	72.5-73.0	72.0-72.5	72.5

### CURRENCY MOVEMENTS

June 13	Bank rate	Day's spread	Close
U.S. \$	1.5340-1.5345	1.5335-1.5340	1.5335
Canadian \$	1.2080-1.2085	1.2075-1.2080	1.2075
Swiss F	2.4300-2.4305	2.4295-2.4300	2.4295
Dutch G	16.35-16.40	16.30-16.35	16.30
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Swedish Kr	10.45-10.50	10.40-10.45	10.40
Scandinavian	10.45-10.50	10.40-10.45	10.40
U.S. cents per Canadian \$	72.5-73.0	72.0-72.5	72.5

### OTHER MARKETS

June 13	Bank rate	Day's spread	Close
U.S. \$	1.5340-1.5345	1.5335-1.5340	1.5335
Canadian \$	1.2080-1.2085	1.2075-1.2080	1.2075
Swiss F	2.4300-2.4305	2.4295-2.4300	2.4295
Dutch G	16.35-16.40	16.30-16.35	16.30
French F	8.45-8.50	8.40-8.45	8.40
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Scandinavian	10.45-10.50	10.40-10.45	10.40
U.S. cents per Canadian \$	72.5-73.0	72.0-72.5	72.5

### Notes Rate

9-77.80	Austria	27-28 1/4
9-80.35	Belgium	59-60 1/2
4-28.50	Denmark	10.23 10 3/4
17.85	France	8.30 8 1/2
9-37.70	Germany	5.70 5 1/2
4-65.80	Italy	1830 150 1/2
9-38.20	Japan	222 1/2
9-0.3792	Netherlands	4.00-4.15
4-32.64	Norway	80.00-10.00
2-5-876	Portugal	77-85
9-98.70	Spain	140 1 1/2
9-3.48	Switzerland	34.5 55
9-4-3878	United States	1.82-1.84
9-08793	Yugoslavia	34-37

Argentina is free rate.



## FINANCIAL TIMES SURVEY

Wednesday June 14 1978

هكذا من الأصل

## LOCAL AUTHORITY FINANCE

The days of sustained rapid growth in local authority expenditure may well have gone for good. But despite the restrictions of the last few years expenditure may still be running above the level allowed for in the last rate support grant settlement.

## Trying to control a supertanker

By Colin Jones

IT HAS often been said that altering the pace or direction of local government expenditure is rather like trying to stop or change the course of a large supertanker at sea. Given enough time and patience, is something may eventually happen. After rising in volume terms by an annual average of almost 9 per cent in 1973-74 and 1974-75, local government normal local government habit, current expenditure rose by more than 10 per cent in 1975-76. In the following year, helped by some underspending on the original estimates, local current spending actually fell back by about 1 per cent. There was some underspending again last year and a drop in interest rates by the end of the day, the year-on-year change in volume was an increase of not quite 1 per cent which meant that spending levels were virtually the same as in 1975-76.

## Estimates

For the present year, the return of local expenditure and rates which is compiled jointly by the Department of the Environment and the Chartered Institute of Public Finance and Accountancy revealed that 457 local authorities in England and Wales had collectively produced estimates of current expenditure which were about 1 per cent (roughly £200m) above the level allowed for in the November 1977 rate support grant settlement. The local authority associations argue, however, that the final outturn local capital spending is likely to be very much closer to the Government's guideline per cent volume increase in current spending, making a 2 per cent rise overall. If the days of sustained rapid growth in local expenditure may well have gone for good.

That may seem a fourthly prediction given the historical trend of local spending. For it has been on an upward path for at least a century, at least in the years of peace. The share of GNP absorbed by local government services, including transfer payments, rose from about 2 per cent to 6 per cent between the 1870s and 1914, from 5 per cent to nearly 10 per cent between the two world wars, and from 8.9 per cent to about 17.18 per cent between the late 1940s and the mid-1970s.

In retrospect, too, this growth could seem predictable. As inflation rises, so more is spent on services, and an increasing proportion of these services have been those that, in most advanced nations, are provided by local authorities.

And yet this trend cannot go on for ever. One did not need California's Proposition 13 to remind us that there is a limit to the level of taxation that people are prepared to stomach. Moreover, in this country at least, the bigger the share of the GNP that local expenditure absorbs, the greater will be the anxiety to control it on the part of those in central government.

For all these reasons, it may be a mistake to discount the forward predictions of spending levels contained in this year's Public Expenditure White Paper. These figures are of course notoriously liable to be changed. But the 1 per cent annual volume increase in current spending, plus some initial recovery in capital spending, which the White Paper offered as the prospect up to the early 1980s could well be not very far from what any new government after the election would want to see. And those councils which have been predicting their structure plans upon the return of a 5 per cent annual growth path sometime in the 1980s will almost certainly have to think again.

This prospect has considerable implications for both local councils and central government. At the same time, the prospect of a lower trend rate in local government spending has implications for local authorities. Public pressure for more services and better standards is unlikely to diminish just because the authorities' ability to accommodate these pressures is growing less fast.

But this may be no bad thing. It could put more impetus into the drive to get better value for money and a better use of the assets and local autonomy completely eroded. There is no desire to emulate the Irish, who this year abolished the domestic rate. But the unitary grant could well be the weapon to give the centre an adequate leverage on the totality of local spending while offering a means of providing full compensation for local needs and full equalisation of local resources.

Most councils dislike the unitary grant because it would enable the government to set a national standard rate poundage and thus expose both underspenders and overspenders to public pressure. But what, in effect, this means is that they are reluctant to acknowledge publicly their own particular responsibilities. Moreover, the unitary grant would expose public view the political judgment that lies behind the decisions on the total grant and its distribution to individual councils, a change from which local authorities could only benefit for it would bring out into clearer public focus the precise responsibilities of central government.

For central government it will mean examining afresh the means by which it tries to exercise an overriding influence over the totality of local spending. The changes introduced to enhance the influence of the rate support grant mechanism—the introduction of cash limits, the abolition of "trend extrapolation" and the setting up of the Consultative Council in order to try to bring about a consensus—may have worked in the emergency conditions of 1975-78, but will they stand the strain of a lasting haul?

Some observers see this as pointing inexorably to the unitary grant concept. While it is unlikely to want to see better use of the assets and local autonomy completely eroded. There is no desire to emulate the Irish, who this year abolished the domestic rate. But the unitary grant could well be the weapon to give the centre an adequate leverage on the totality of local spending while offering a means of providing full compensation for local needs and full equalisation of local resources.

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# From Europe's biggest name in electronics— the world's leading financial terminal system

Europe's largest electronics company—Philips—is now the world's leading manufacturer of financial terminal systems; PTS 6000 terminal equipment has been ordered for some 20,000 teller positions since 1971. The reasons for this achievement can be summarised in two words: size and service.

## Size

Philips' size means that massive investment is available for research and development in all areas of electronics progress: with worldwide sales of over £7,000 million, and an R & D budget exceeding £300 million, Philips can offer a degree of technological sophistication which few other concerns can rival. Thus Philips is a world leader in micro components: a major name in computers, with nearly 70,000 separate installations; and also Europe's premier supplier in telecommunications—the key to the distributed data processing systems of the future.

## Service

Philips' size also accounts for the company's attitude to service: all aspects of Philips' activity are uniquely customer-orientated, and its standards of customer service are acknowledged as being second to none. Nowhere is Philips' concern for service more obvious than in Britain: a nationwide customer support network, looking after £40 million-worth of equipment and 2,700 users, is recognised as setting standards for the entire industry.

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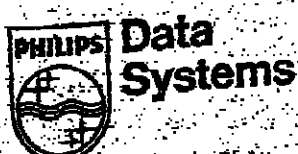
## Philips Data Systems

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computers that talk  
your language



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## LOCAL AUTHORITY FINANCE II

## The rating system

WITH THE Government very considerable lobby which should not be allowed to obscure one point. This is the fact that a revaluation is now going ahead, albeit on the traditional basis. The paucity of free market rental evidence will undoubtedly cause the Inland Revenue valuers very considerable difficulties. At the time of the last revaluation in 1973 barely 2 per cent of residential properties were let at freely negotiated rents (and hardly any post-1945 properties) as against the minimum of 10 per cent market evidence which was considered essential at the time of the 1963 revaluation. The proportion is probably even tinier now.

Mr. Shore explained the defence on the grounds that it had become apparent that there would be no majority for capital value legislation in the present Parliament. That may well be. The Conservative Opposition have declared themselves against the use of capital values. And the prospect of a major disturbance to established rateable value relationships between different kinds of residential property, and between properties in different parts of the country, could well have aroused awkward political controversies, particularly in the run up to a general election.

However, disappointment over Mr. Shore's announcement

may have been a little clearer. An incoming Conservative administration might conceivably tell the Inland Revenue to stop working on the new list. But, that proviso apart, it does now seem that another revaluation based upon the traditional rental value basis of assessment will take effect in four years' time—in England and Wales, that is, for Scotland had its revaluation two months ago.

Mr. Peter Shore's decision to postpone the adoption of capital values and to retain rental values as the basis of assessing residential properties has come as a big disappointment to the

very considerable lobby which should not be allowed to obscure one point. This is the fact that a revaluation is now going ahead, albeit on the traditional basis. The paucity of free market rental evidence will undoubtedly cause the Inland Revenue valuers very considerable difficulties. At the time of the last revaluation in 1973 barely 2 per cent of residential properties were let at freely negotiated rents (and hardly any post-1945 properties) as against the minimum of 10 per cent market evidence which was considered essential at the time of the 1963 revaluation. The proportion is probably even tinier now.

Even so, a respectable case can still be made for conducting a revaluation on the traditional basis, as against, not having one at all. The first reason is that regular revaluations are essential if the rating system is to function effectively. Property value relationships are changing all the time, both within the domestic and business sectors and between them. It makes nonsense of the idea of a local property tax, if the values on which the tax is

levied are allowed to become unrealistically out-of-date. In spite of the 1926 statutory requirement for revaluations every five years, only five revaluations have in fact been held in the past 50 years and some of those five were not full revaluations.

## Shortage

Secondly, there may be a desperate shortage of rental evidence upon which to revalue residential property, but there is no such problem for commercial and industrial property. Indeed, it is not too much to say that the non-domestic sector very much needs a revaluation, since property rents have changed a good deal since 1972-1973 and some properties—offices, for example—may be overvalued in relation to today's market patterns.

Thirdly, any kind of revaluation will involve some redistribution of tax (i.e. rates) burdens, and this disturbance can in turn lead to a good deal of public disaffection with the rating system. This was seen in England and Wales in 1973, and also in Scotland last year when the new valuation lists were published and even more noticeably in April 1 when the first rate demands based upon the new rateable values arrived through Scottish ratepayers' letter-boxes.

By 1982 almost ten years will again have elapsed since the last revaluation in England and Wales, a period in which infla-

tion has been running at record rates for peacetime. The effect upon rateable values—and thus upon ratepayers' attitudes—will be considerable.

It is true that, overall, poundage rates will be reduced but there will still be some redistribution of rates burdens as between individual ratepayers. To add to that the additional disturbance to existing relationships which a switch to a capital value assessment basis would involve could be asking for trouble.

In other words, the double effect of the nine-year delay since the last revaluation and the adoption of capital values could well have led to such an outcry that public tolerance of the rating system might have been stretched to snapping point.

No doubt transitional arrangements would have been devised so as to spread the effects of the new valuation method over several years and thus soften the sharper edges. But no arrangements could make such a change-over totally painless. The precise effects of a revaluation based upon capital values will not really be known until one has been made. But pilot studies conducted by the Inland Revenue have given us some indications.

There would, for example, be some considerable redistribution of rates burdens against occupiers of residential property at both the top and bottom end of the scale. Properties in the countryside would lose

the value of a property. The

Government indicated last year that it intended to legislate to that effect, together with another Layfield recommendation limiting the right of appeal to the Lands Tribunal, and Wales are now owner-occupied it is difficult to resist the conclusion that capital values ought to become the basis of assessment, as they already are in many other countries.

No other possible alternative local tax would be as simple and as inexpensive to administer and collect. No other would have as predictable and substantial a yield. And the alternative basis for a property tax are either: like rental values, becoming more and more unwelcome or like measures of surface area, would be more regressive.

Local rates may not be liked. But the adoption of capital values, together with the retention of rate rebates, would probably make the rating system a little more progressive. And the fact that so large a proportion of local government spending is financed by government grant out of the proceeds of general taxation goes a long way to meet the other point of equity which is levied against the rating system—namely, that local residents who are not ratepayers fail to pay their proper share of the cost of local services.

In point of fact, taxpayers nowadays contribute almost twice as much as ratepayers towards the cost of running local government. The more fundamental question, however, is whether local government should have a tax base at all. The next question is, if so, then what should it cover? Only when those two questions have been answered, can one decide the question of what tax base should be.

If the answer to that question is "yes," then it is hard to see that effect, together with another Layfield recommendation limiting the right of appeal to the Lands Tribunal, and Wales are now owner-occupied it is difficult to resist the conclusion that capital values ought to become the basis of assessment, as they already are in many other countries.

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Colin Jones

## Changes

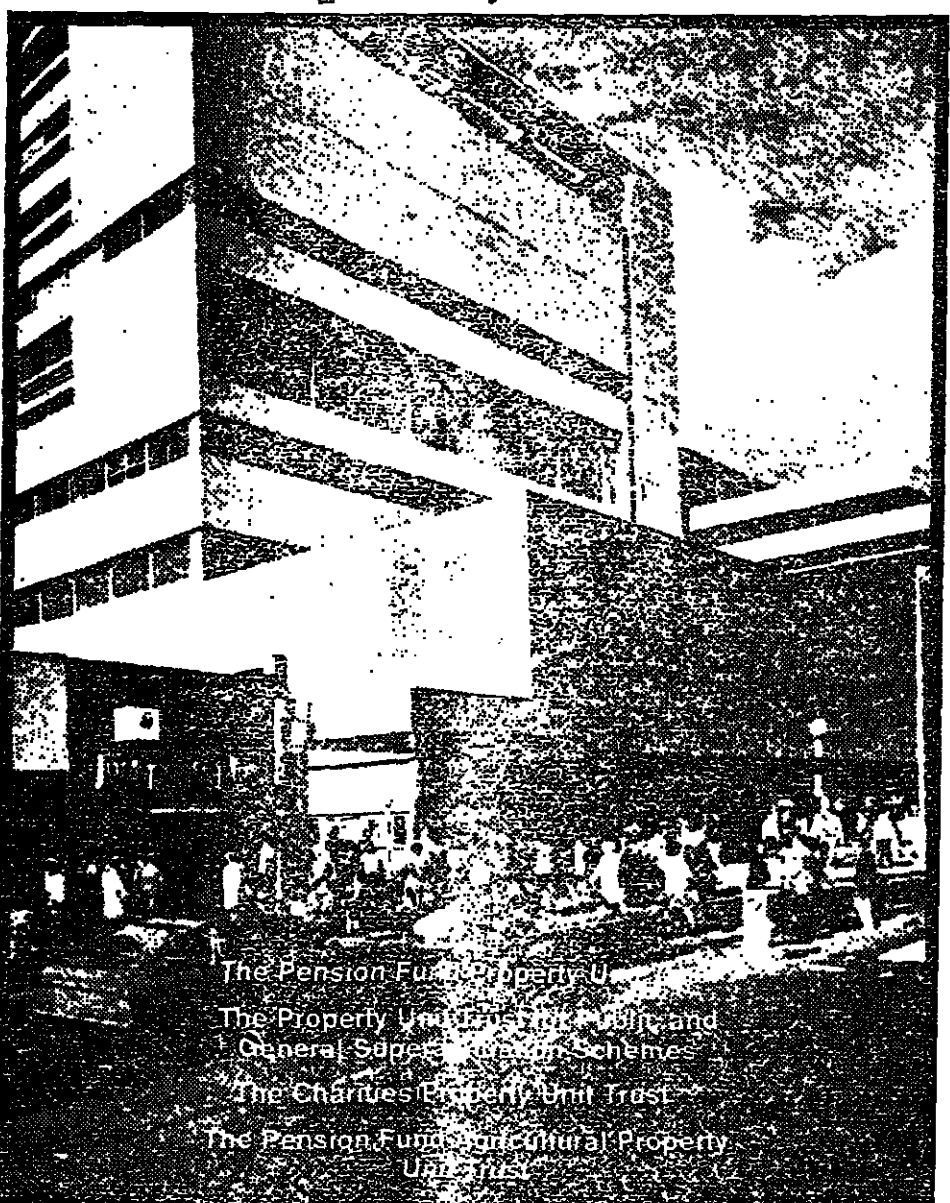
The Government argued that these changes would strike a fair balance between the rights of individuals and the efficient operation of the rating system. It rejected a further Layfield recommendation concerning the proportion of the increase in rates (presently 50 per cent) which may be withheld following a revaluation if a property has not been altered and the appeal is lodged within six months. On the other hand, the volume of appeals which followed the 1973 revaluation placed so great a burden on local valuation officers that, if repeated in 1982, it could again impair the chances of keeping to a rhythm of five yearly revaluations. If capital value rating is to be adopted, then certainly the change ought to be made as soon as possible after 1982.

This, of course, assumes that it is right to adopt capital values as the basis for assessing rateable values of residential property. Despite the strength of the largely professional lobby in favour of the change, the report that the period for appealing against assessments should be restricted, as is already the case in Scotland, to the first year of a new list except where some material change has occurred affecting the value of a property. The

tax base.



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## Value for money

THE SHARP rate rises in the mid-1970s and the apparent decline in some local authority services were, in retrospect, almost certain to lead to a massive public outcry against the inefficiency of bureaucracy. This duly took place with, at times, almost a hysterical degree of criticism being heaped on public service workers.

While it seemed that most local authorities were taking this criticism on the chin, it has become clear that a major part of their defence has been to show just how local authorities give value for money. This week, for example, the Institution of Municipal Engineers Conference in Bournemouth has taken value for money as its theme. And the Association of Metropolitan Authorities recently published a survey showing how its member authorities had been giving value for money.

The problem, however, is that while local authorities are probably the biggest single spenders in the economy—employing over 3m people—there are no objective standards of performance or output against which costs can be measured. How do you judge the effectiveness of meals on wheels or the provision of nursery facilities, for example?

Moreover, the physical, social and economic characteristics of local authorities vary widely. For this reason it is difficult to make valid comparisons of unit costs or other comparative measurements of the performance of different authorities.

Existing safeguards against extravagance and efficiency are broadly split into external controls from the auditing system or professional organisations and internal financial control systems.

The accounts of all local authorities are subject to annual external audit, either by civil servants—the so-called district auditor—or auditors from professional practice. Auditors of local authority accounts have responsibilities additional to

those of auditors of commercial accounts. Under the guidance of the Layfield inquiry, local authority accounts auditors should ensure that "the accounts do not disclose any significant loss arising from waste, extravagance, inefficient financial administration, poor value for money, mistake or other cause."

In addition to public audits, such organisations as the Chartered Institute of Public Finance and Accountancy (CIPFA) and the Local Authorities Management Services and Computer Committee (LAMSSAC), help maintain pressure on local authorities to operate efficiently. CIPFA represents professional accountants in the public services and LAMSSAC provides advice on management services.

Although there is little question raised over the integrity of local authorities in internal financial control, the 1976 Layfield Report on local government finance suggested that the Chief Financial Officer of a local authority "should be under a statutory obligation to report regularly to the council on defined financial issues."

But the Report concluded that "the best way to promote all-round efficiency and value for money by external means is through the dissemination of information on best practices to enable true comparisons to be made."

The Layfield Report, and the subsequent Government green paper in response, which gave broad support to the Report, have been strongly criticised by the Association of Metropolitan Authorities. The AMA

feels that the Layfield inquiry had been badly timed, coming off after the 1974 local government re-organisation and before the new local authorities had settled down.

"The Association considers that as a result of this the practice of local government finance was put under the microscope at a time when most effort was, of necessity, directed towards maintaining the provision of services to the public with correspondingly less attention than usual being paid to administrative methods."

## Savings

To counter what the Association believes is a false impression of local authorities, member councils were asked to give details of where savings were being made without any drop in standards. The survey came to the conclusion that "local authorities are actively pursuing ways of obtaining better value for money."

In particular, the survey adds, they have concentrated in recent years on schemes which will produce an immediate saving, but they are also looking to the future particularly where energy conservation and building maintenance are concerned.

The survey found that the amounts saved by local authorities in the last two to three years have been "substantial."

Most of the authorities which replied to the AMA's survey drew attention to the fact that they saw the pursuit of value

for money as an "ongoing activity" and not as a series of one-off projects. The most spectacular results came from the Manchester metropolitan district, which revealed annual savings from its work study schemes of £865,000 plus increased productivity worth a further £1,452,000. When these are added to other savings as a result of these work study schemes, the annual saving for this one district was some £2,750,000. Further schemes which were estimated as having a savings potential of another £125,000 a year had to be deferred because of problems it would have created for pay policy.

One London borough, with a population of only slightly more than 200,000, could point to a work study scheme in operation giving an annual saving in excess of £500,000.

The most popular area of value for money schemes, according to the survey, were those connected with goods and services. The reason for this seems to be that authorities have chosen areas where substantial savings can be made quickly from a relatively small investment.

Some 63 per cent of the 46 authorities surveyed had introduced either fuel economy measures or investigations into fuel tariffs. Manchester could point to total savings in excess of £2m as a result of such measures, with annual savings of £220,000. Other authorities reported savings in the range of £10,000 to £200,000.

Other moves by local authorities to achieve better value for money include the use of com-

puters both to reduce manpower and to improve management information and, therefore, efficiency. One area where this is particularly important is in relation to income collection and payments. The effect of speedier recovery procedures and improved payment systems on cash flow and borrowing requirements can produce major savings on interest payments. One metropolitan district estimates annual interest savings of £20,000 simply as a result of introducing a direct debit system for the payment of salaries.

Some local authorities, however, have adopted a package approach to cost savings rather than any major initiatives. One London borough can point to a number of small initiatives which taken together produced savings of £320,000 in 1977-78, rising to £600,000 in a full year.

But while local authorities are apparently eager to share their ideas with each other, the AMA suggests that there is a need for a central directory of information about value for money studies being carried out.

And there is growing concern among those outside local authorities that stricter auditing controls are required to ensure efficiency. The Government has recently acknowledged this by setting up a new Advisory Committee on Local Government Audit. This new committee, however, was given a frosty welcome by the local authority associations, who believe that more extensive external controls are unnecessary.

David Churchill

## Grants arouse bitter controversy

THE WAY in which government grants are distributed to local authorities has become more and more a matter of bitter contention in recent years. During the 1960s and early 1970s it was widely recognised that the grant distribution system unduly favoured the "shires" at the expense of the larger cities. An opportunity to correct this imbalance was taken when the structure of local government was changed in 1974.

But the shift of grant shares away from the shire counties and in favour of the metropolitan areas including, especially, Greater London has been more or less continuous ever since 1974. The row between the various local authority associations and between them and the government broke out into full public view during the last rate support grant negotiations. This was in spite of the introduction of two kinds of "safety net" provisions (one new, the other an improvement on a previous device) to temper the impact upon grant-losing authorities.

Part of the trouble lies in the growing proportion of local government expenditure which

is grant-financed. For the greater the percentage of grant, the greater is the need to make the distribution fair as between individual authorities: at the same time, the greater will be the "gearing effect" of marked changes in grant payments upon local rates calls.

Part of the trouble, too, is the fact it is much easier to soften the impact of changes in grant distribution when local authority spending is rising at a fair clip and thus the total grant is also increasing. By the same token, it is much harder to do so when spending is not growing at all. In the present climate of restraint on local spending, changes in grant distribution mean actually reducing payments to some authorities in order to give more to others.

At heart, however, the basic problem lies in the nature and purpose of the grant system. Grants are designed to do two things. The first is to finance the part of the cost of providing local services which cannot be financed out of the local authorities' own tax bases. The second purpose is to enable individual councils providing broadly similar standards of ser-

vice to levy broadly similar rates poundages whatever the differences in their spending needs and whatever the differences in the size of their tax bases.

The difficulty lies not so much in the first objective but in the second. For there is no really sure way of assessing with precision the spending needs of every single council. There are of course various statistics which indicate different types of need. But, at bottom, the decision must be a political judgment. It is not possible to arrive at a completely fair distribution.

Furthermore, there is considerable room for debate about both the significance and the adequacy of the statistics that are used. For a start, there is the question of how to treat London, which has both heavier spending needs than most of the rest of the country and higher rateable resources per head of the population than most (but not all) places. If the grant system was designed to equalise rateable resources, the problem would be eased. But it does not. It is tantamount to a deficiency payment, bringing low resource

areas up to a given national standard of rateable value per head.

Therefore, if London's needs are allowed for in full, should the grant be adjusted to allow for London's extra resources or given the much lower differentials in income per head between London and elsewhere, should this aspect be ignored or, at least, minimised? As it happens, it has been the judgment which has been made about London in each of the last four rate support grant settlements which has been responsible for most of the reduction in the grant share going to the shire counties.

The next point concerns the methods which are used to assess need. The present method is to arrive at a formula based upon the use of a multiple regression analysis of past expenditure designed to identify the factors which appear to be associated with above-average spending and thus, by implication, with above-average need. The assumption, of course, is that spending patterns reflect patterns of need and that other factors, such as different propensities to spend, differences

CONTINUED ON NEXT PAGE

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# New rules for borrowing

THE LAST twelve months has been one of the most significant periods of development in the history of local authority finance and Town Hall treasurers will not be short of things to talk about at their annual get-together in Edinburgh this week.

Over the past year the authorities have had to digest the implementation of the voluntary code of practice for long-term borrowing and the introduction of floating rate stock and bond issues. Interest rates have fallen from around the 15 per cent level at the end of 1976, to under 5 per cent late last year. Now they are back in double figures.

Against this background the authorities could be forgiven for wanting to keep their heads down. However, since they occupy such an important place in the financial system—their debt of around £30bn is not far short of the size of the National Debt—they cannot sit on the sidelines. They are very important forces in the short term money markets. Outsiders often do not realise that a medium sized authority such as the City of Coventry turns over well in excess of £1bn of debt annually which represents something like £5m per day.

The sums are large especially in the temporary debt market, and, although they are often routine transactions, local authorities are not immune from the vagaries of the inter-

est rate cycle. However, what has really been exercising the minds of local authority financiers over the past year is the new voluntary code of borrowing practice.

Although this was not introduced until August of last year it had been in the air for some time. It was well known that the Treasury had been worried about the shortening maturity of much local authority debt. As interest rates rose, treasurers went shorter and shorter, so that they would not have to commit themselves at high rates for long periods. This was fair enough, but the Treasury was clearly worried that if there was ever any special crisis, such as another Mersey Docks and Harbour Board incident (and the recent troubles of the Port of London authority show that this was no idle threat), then the authorities might have difficulty raising finance.

The Treasury's concern was understandable. The latest return of outstanding debt for the end of March 1977, shows that only £11bn fell due after April 1980. By contrast, £14bn fell due technically within one year and another £8bn in the next two years. The Treasury's initial reaction was to impose a strict restraint on longer-term borrowing by further use of the Control of Borrowing Order. The local authorities were not at all happy about the use of this rather blunt instrument from the vagaries of the inter-

Treasury to accept an offer from the Association of Local Authorities to introduce their own code voluntarily.

As the code was not introduced until last August its impact on 1977-78 was not very tough. A further two transitional years are provided with increasing restraint until 1980. 1981 when all new local authority longer-term loans must have a minimum seven year average maturity. The main elements of the new code have been summarised by Butler Till Ltd. in their very useful book *Money Services for Local Authorities*.

They are as follows—(a) longer term borrowing (including P.W.L.B. loans) is to be so organised that the average period to maturity shall be four years in the year to March 1978, five years to March 1979, six years to March 1980 and seven years thereafter.

(b) Even though the average is achieved, loans with a maturity of one, two and three years shall each not exceed 15 per cent of total longer-term borrowing (45 per cent in all). These allowances are not "transferable." If less than 15 per cent one year money is borrowed, the shortfall cannot be made up with two or three year money.

(c) Amounts borrowed by negotiable bonds may be excluded from the three 15 per cent calculations, but in that event the relevant percentage for the year is reduced by 25 per cent in the years in which the bonds mature.

## Maturity

(d) If in any year a single maturity, or the sum of any two maturities, exceeds 15 per cent of the loans to be raised during the year, the average period for that year may be reduced by

one year, and the percentages increased by 5 per cent.

Although the code is simple in conception, it is more complicated to operate since there are difficulties associated with applying it to instrument and option loans, for example. However, it is already having a major effect on both the short-term money markets and the longer term debt markets.

Authorities have been relying heavily on the temporary debt market. In 1976-78 over a third of the authorities' net borrowing was funded from this source. However, in the first nine months of 1977-78 net temporary borrowing has been reduced by £1.6bn. The lower interest rates obviously explain part of the fall but the new code is the real reason. Even though overall net local authority borrowing rose by only £0.8bn, the authorities borrowed their net long-term borrowing by £2.1bn.

The code has not really

affected the negotiable bond issues were healthily over-subscribed. Coupons fell but the regular weekly issue of £20m or so "yearling bonds" has not been increased, although the number of bonds with up to five-year maturities has been slowly growing.

The authorities have also been increasing the proportion of their money they take from the Public Works and Loan Board.

The real impact has been in the corporation stock market. When interest rates soared above 15 per cent in 1976 the local authorities stayed away from the market but as rates started heading down they moved back in. The ice was broken by the Corporation of London in February of last year. It issued £25m of last stock on a 131 per cent coupon and a fortnight later the GLC announced a £50m issue on the same coupon. For the next six months roughly two authorities a month came to the stock market and virtually all the

over six-month inter-bank rates. The issue went well, and paved the way for the others. After some initial hesitation the idea caught on and the next issue, for Strathclyde, managed by Pender and Boyle, only carried a 100 per cent margin over inter-bank rates and went equally well. From then on the point margin has been standard.

At first it was thought that issues had to have a merchant bank link so that the stock broker could be assured of a healthy demand from the banking community, but the stock broking fraternity soon realised that they could arrange the deals just as easily on their own.

The success of the early issues was due to the fact that the authorities could borrow money more cheaply than direct from the banks. However, the latter soon realised that the local authorities would make ideal customers for their medium-term loans, especially since they were flush with funds and short of borrowers.

The problem with floating rate stock issues at the moment is that they are only of five-year maturity. Beyond that commission rates are non-negotiable and stocks of over five years must be quoted inclusive of accrued interest. This does not appeal to the banks and the stock exchange will probably have to change its rules if floating rate stock issues of over five years are to become common place. There is understood to be a seven-year issue, scheduled provisionally for July, waiting in the wings but it is as yet unclear how the managers will circumvent the above problems.

By contrast the syndicated bank loan is an attractive way of borrowing for the local authorities. There is no need to queue up for permission at the Bank of England, as there is with conventional stock issues, and the maturities can extend to ten years and the authority has much more flexibility in terms of drawdown periods and early repayments. At the moment, the introduction of the corset is squeezing the banks' liquidity and so medium-term bank loans will be harder to come by and more expensive.

The questions are legion. The point is not so much the scope for attracting extra income, though that in itself is pertinent, but the need to look upon local services as a constantly changing kaleidoscope of priorities. The proportion of the national income which is devoted to the provision of local services is never likely to be large enough to accommodate everyone's aspirations. There could well be a case for charging for, or even privatising, services which are commanding a steadily diminishing priority in order to free resources for the newer or more urgent priorities which arise.

But sooner or later the question of social attitudes, or what are assumed to be social attitudes, will need to be tackled. The public perception of social needs is constantly changing. Services which were once provided as a basic necessity can

C.J. William Hall

## Where the money comes from

LOCAL AUTHORITIES have been quick to take advantage of the Government Act which came into operation in April last year permitting them to conduct local lotteries. At the last count some 260 local authorities had begun to raise money in this way, which is just over half the total number in Britain.

Most of them have been glad to off-load the administrative chores to the various private sector companies—such as Littlewoods, Vernons, Norton and Wright, Ladbrokers and many others—which are offering to run lotteries for them. With about 40 per cent of the take coming back to the council as the net contribution to its funds, lotteries could well now be contributing in the region of £50m a year to the councils' taking part.

This may seem very small beer when measured against the £20,000m-plus a year which local councils receive from all sources—rates, grants, trading income, rents, fees, charges, interest and dividends. But the Act limits the size of local authority lotteries in terms both of turnover and prizes both of turnover and prizes. The point, however, is that this £50m, which could rise towards £80m or more a year when other councils join in, is a useful supplementary source of income. It comes on the margin, and this is what counts.

Holding a lottery is not the only way in which a local authority can increase its income other than from rates, payments, or in the form of government grants, from the taxpayer. In all local authorities are collecting well over £2,000m a year in rents, fees and charges which is about 13 per cent of their total income.

Almost half this sum comes from rents for housing and land, and rather more than a tenth comes from trading services, such as municipal bus services, ports and airports, markets, slaughterhouses, civic halls, theatres and restaurants, and industrial estates. The remainder comes from services provided out of the general rate fund. Examples here are further education colleges, school meals, libraries, museums and art galleries, residential homes, car parks, private street works, sports centres, parks, swimming baths, public laundries, allot-

ments, cemeteries and approaches to charging policy are inhibited by social attitudes about the kind of local services which should be provided free or at least substantially below cost. But even where these restraints do not operate, and local councils have discretion, one finds a wide range of approach to charging policy.

It would be nice to think that the whole question of local charging policies is about to be opened up. The Layfield Committee on local government finance made a lot of sensible points, and in particular called for a thorough review on such matters as the distinction between charges that should continue to be fixed or regulated by the government and those which should be left to local discretion; the anomalies both between and within local services and between local services and services provided by other public bodies; the levels of charges which are set by statute; the services which should normally be expected to cover their costs; and the procedures and criteria which councils should observe in

determining both charging policy and the levels of charges. A review is now being conducted on these lines by the government and the local authority associations. Housing rents, transport fares, school meal charges, and public library charges have been excluded from the review for one reason or another. Even so, the review covers activities yielding about £1bn a year.

New ideas need not necessarily affront social attitudes. For example, how often should charges be adjusted in the light of rising costs? Could not more use be made of expensive local assets, such as by hiring out school and college playing fields, to outside clubs and organisations or by offering further education establishments as conference venues?

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approaches to charging policy are inhibited by social attitudes about the kind of local services which should be provided free or at least substantially below cost. But even where these restraints do not operate, and local councils have discretion, one finds a wide range of approach to charging policy.

It would be nice to think that the whole question of local charging policies is about to be opened up. The Layfield Committee on local government finance made a lot of sensible points, and in particular called for a thorough review on such matters as the distinction between charges that should continue to be fixed or regulated by the government and those which should be left to local discretion; the anomalies both between and within local services and between local services and services provided by other public bodies; the levels of charges which are set by statute; the services which should normally be expected to cover their costs; and the procedures and criteria which councils should observe in

determining both charging policy and the levels of charges. A review is now being conducted on these lines by the government and the local authority associations. Housing rents, transport fares, school meal charges, and public library charges have been excluded from the review for one reason or another. Even so, the review covers activities yielding about £1bn a year.

New ideas need not necessarily affront social attitudes. For example, how often should charges be adjusted in the light of rising costs? Could not more use be made of expensive local assets, such as by hiring out school and college playing fields, to outside clubs and organisations or by offering further education establishments as conference venues?

But sooner or later the question of social attitudes, or what are assumed to be social attitudes, will need to be tackled. The public perception of social needs is constantly changing. Services which were once provided as a basic necessity can

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£m	1973/4	1974/5	1975/6	1976/7	1977/8*
Gross Long-term	716	711	833	941	893
Negotiable Bonds	31	12	199	158	355
Stock Issues	1,698	2,671	3,224	3,660	2,701
Fin. Institutions	819	1,357	1,002	1,138	665
Other	1,391	1,826	2,102	1,679	1,939
P.W.L.B.	4,655	6,577	7,360	7,576	8,353
Net Borrowing	1,725	2,996	2,376	1,275	2,077
Long-term	835	313	(-137)	718	(-1,234)
Temporary	2,560	3,309	2,439	1,993	843
Total	2,560	3,309	2,439	1,993	843

\* First nine months.

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## Grants

CONTINUED FROM PREVIOUS PAGE

in cost levels, or differences in the standards of service being provided, can be ignored.

Moreover, there is now acute shortage of up-to-date data for most categories of need. Because of the mid-term population census which was due to take place in 1976 was cancelled (in one of the Government's spending cuts), figures have to be drawn from the 1971 census. Because most of these are now woefully out-of-date, the data which are used in the multiple regression analysis have become fewer and fewer.

Yet some 1971 figures are still being used. The formula derived from multiple regression analysis for the 1978-79 grant distribution was based upon seven factors, of which two—single parent families with dependent children, and the number of primary and secondary pupils of compulsory school age—received a combined weighting of 63.2 per cent. (It should be explained that each of the seven factors was used, not so much for its own sake, but because the analysis had shown that they were surrogates for a variety of factors that determined spending needs).

The school population figures (30.3 per cent weight) posed no problem. They were based upon January, 1977, figures. But the figures for one parent families with children (32.9 per cent weight) were drawn from the

1971 census. A third factor, with a weight of 6.8 per cent, was the number of persons living in households lacking the basic amenities. This, too, was based upon the 1971 census, which meant that almost 40 per cent of the formula used to govern the distribution of this year's grant was based upon statistical data which is now seven years old.

It was not surprising that the three main local authority associations each proposed a different grant formula to the grants working party, and that the Department of the Environment should have come up with a fourth. In the end, the formula derived from the multiple regression analysis—which had been used in previous years—was retained and the other three methods were dropped (for the moment, no doubt).

More important still, however, a special survey is now under way with a view to thickening up the volume of up-to-date data available for future grant distributions. The provision of more and better indicators of need will be essential whatever happens to the grant system—whether the present system is broadly retained or whether the proposed system of unitary grants is eventually adopted.

C.J.

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## FARMING AND RAW MATERIALS

## Brussels acts on pigmeat imports

BY CHRISTOPHER PARKES

EXTRA Common Market levies will be charged on imports of pork and live pigs from East Germany, Sweden and Finland from next Monday, because exporters there have been selling inside the EEC at less than minimum import prices.

The decision to charge the extra levies was made by the pigmeat management committee in Brussels yesterday after Commission investigators confirmed French charges that minimum import prices were not being respected.

At the same time, subsidies on Community pork exported to non-member countries are to be increased. Slaughterhouse owners are also to be paid special premiums for stockpiling the meat in their cold stores instead of selling it on the open market.

These moves follow the Commission's rejection of a demand from France last week that all imports of pigmeat from outside the Nine should be banned to prevent over-supply undermining market prices.

The Commission is still paying private storage premiums on some 25,000 tonnes of pigmeat which have been held by abattoirs since last year.

There is no full-scale support-buying scheme for pork such as that applied to beef or dairy products. Private storage payments are the most common means of supporting the market.

Apart from the French complaints, the Commission was prompted to act by evidence from the Netherlands and West Germany that pigmeat production there would rise 10 to 12 per cent towards the end of this year.

Pork output in the UK is now at a cyclical low and health

regulations, which virtually exclude imports from most of the rest of the EEC, mean that the British market cannot be used to soak up excess production from the Continent.

Export subsidies on live pigs go up from 50 to 100 units of account a tonne. Subsidies on carcasses and shoulders rise from 150 to 150 units a tonne but those on hams and boned meat and bellies remain unchanged.

Levies on live pigs imported from East Germany go up by 300 units a tonne and the charge on boned pork from Sweden has been increased by 300 units a tonne.

Imports boost butter mountain

THE COMMON MARKET paid for almost 20,000 tonnes of home-produced butter to be put in cold storage last month because there was such a glut of imports in Britain that the UK market was unable to absorb the surplus.

About 5,000 tonnes were added to the British part of the EEC butter mountain, while more than 14,000 tonnes were locked away in private stores.

This subsidised mountain will add to the over 300,000 tonnes of butter already in the UK from the EEC for sale until the autumn, when it is due to be sold.

There are now almost 34,000 tonnes of British butter stored in the mountain, compared with 20,000 tonnes two months ago.

The 4,973 tonnes taken into intervention during May was the highest quantity of UK butter ever removed from the market in one month.

## Australian sheep flock cut again

CANNBERRA, June 13

AUSTRALIA'S SHEEP and lamb population fell to 130.54m head on March 31, compared with 135.30m a year earlier, according to first estimates from the Statistic Bureau's 1977-78 agricultural census.

This is its lowest level since 1954 and represents a fall of 2.8 per cent on the peak of 138.00m head in 1970.

The estimate is about 2.5m head down on that made last year by Mr. Malcolm Vawter, the Australian Wool Corporation's general manager, marketing, at the International Wool Textile Organisation conference in Munich.

Wool exports fell to 376.58m kilos, greasy equivalent, in the eight months to February 28, from 374.24m in the first eight months of the 1976-77 season.

There were also sharp drops in sales to all the main markets. Exports to Japan fell to 114.59m kilos from 176.25m, while those to the Soviet Union fell to 49m from 73.03m.

Western Europe also imported much less.

Fish catch 'could double by end of century'

By Our Commodities Staff

THE WORLD fish catch could almost double by the end of this century, a UN expert stated yesterday.

Mr. W. P. Appleyard, chief of the UN Food and Agriculture Organisation's fisheries development service, said that because of growing demand for food and the new 200-mile economic zones, "we could be seeing catches of 120m-130m tons by the year 2000, compared with 60m to 70m at present."

The organisation estimates that such an increase would require nearly \$30m in new investment.

Mr. Appleyard told an FAO bankers' meeting that extended coastal zones would, during the next decade, stimulate investment, diversify fish production and give rise to a variety of "business arrangements" between coastal countries, investors and fish farms.

He noted that 63 nations, including most big fishing powers, had already imposed 200-mile limits and predicted that similar action would be taken by the remaining 64 coastal states. These would make each country rethink its fishing strategy.

## Tin prices rise on supply fears

BY OUR COMMODITIES EDITOR

TIN PRICES jumped on the London Metal Exchange yesterday to the highest level since last December, after the closure of the Copper Pass smelter because of an industrial dispute.

Standard grade cash tin closed £110 higher at £6,610 a tonne after moving up steadily all day.

The declaration of force majeure by Copper Pass on its supply contracts, and the warning that deliveries will be cut off for at least a month, are expected to force consumers to come to the metal exchange for supplies.

Although the quantity involved is not large in world terms, the move comes at a time when Europe in particular is suffering from a shortage of immediately available supplies.

Stocks held in the London Metal Exchange warehouses are at a low level, and the cash price has already moved to a substantial premium over the three months quotation. Yesterday the gap widened still further, the three months price gaining £8.75 to £6,702.5.

So far consumers, led by the U.S., have rejected pleas for a higher price range, claiming that output costs have not risen sufficiently to justify an increase.

Since the last rise was in July last year, however, it is thought likely that the producers will succeed in obtaining an increase at the July meeting of the Tin Council.

By JOHN EDWARDS, COMMODITIES EDITOR

KEEP UP WITH POTENTIAL DEMAND in recent years.

The U.S. proposal is that the buffer stock should aim to stabilise prices within a 50 per cent range—25 per cent above and 25 per cent below an agreed midpoint price. It suggests that the buffer stock should have a maximum size of 250,000 tonnes.

It is proposed that the council should review the price range at least once every two years, but that any change in the price range would need a two-thirds distributed majority in favour.

Although export quotas are not normally favoured by producers, there could be divided loyalties in this case since a quota system—based on past performance—would effectively suit established producers, such as Ghana and Nigeria, rather than expanding suppliers like Brazil and Ivory Coast.

At the same time the U.S., as the world's biggest consumer of cocoa, could have a powerful influence in controlling price movements if a two-thirds majority was required for any change.

Meanwhile Reuters reported from Bangkok that tin-producing and consumer countries had resumed their tin-of-war over whether the International Tin Agreement's "floor" and "ceiling" prices should be raised.

Thailand set the tone for the five-day meeting of the Tin Council's economic and price review panel by calling for higher prices to encourage production.

Mr. Kasem Chaikavij, Thai Industry Minister, said that the present "floor" price was very discouraging for the tin industry at a time when production costs had increased.

So far consumers, led by the U.S., have rejected pleas for a higher price range, claiming that output costs have not risen sufficiently to justify an increase.

Since the last rise was in July last year, however, it is thought likely that the producers will succeed in obtaining an increase at the July meeting of the Tin Council.

Hardwoods are used in relatively small quantities in a host of industries, but the main outlets are in construction and furniture. It is the decline in consumption here that has caused the setback and, until there is a revival in these industries, the importers will have to live with the lower levels of consumption.

The indications from the statistics are that it is adapting fairly well.

Although there was certainly a decline in price for foreign flow, this was not such a feature of trading as it was in the previous two years. The trade's buying and year-end stocks, however, are kept in line with the lower level of consumption.

Since the trade draws supplies from about 30 countries there is seldom a year when imports are self-sufficient.

A TEAM of UN Food and Agriculture Organisation experts will visit Dar es Salaam this week to look at the best way to fight the Horn of Africa locust plague.

Mr. John Malceia, Tanzanian Agriculture Minister and chairman of the Desert Locust Control Organisation for east and central Africa, told Reuters that the talks would probably start tomorrow and cover the mobilisation of international resources to counter the threat.

Officials from the desert locust control headquarters at Addis Ababa would also attend. The FAO is worried that the locusts could affect a wider area

## UK TIMBER TRADE

## Use of hardwoods at post-war low

BY A SPECIAL CORRESPONDENT

THE U.K.'s consumption of imported logs and lumber fell to its lowest point since the war last year and the trend is continuing this year, with the first quarter's figure about 3 per cent down on the corresponding quarter of last year.

Apparent consumption last year was 81,000 cubic metres—3 per cent down on the previous year. Imports at 80,000 cubic metres were down 4 per cent. The value of imports last year was £103m.

About 20 years after the war, the national consumption of hardwood remained steady at just over 1m cubic metres. In the exceptional year 1973 it hit a post-war high of 1.4m cubic metres, but since then a decline has set in and there are serious doubts in the trade whether the 1m mark is now a thing of the past.

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do not have to cope with an interruption of supplies through war, political upheavals, or changes in foreign Governments' commercial policies.

Last year's statistics showed that Ghana dropped from third to tenth among countries supplying sawn lumber, sending 62 per cent less of this and 45 per cent less in volume of logs. Ghana was experiencing severe balance of payments problems last year and was unable to replace sawmill and forest extraction machinery, thus reducing supplies.

The UK trade is also convinced that the intervention of the Timber Board in the commercial relationships between producers in Ghana and importers over here had a great deal to do with its decline.

Among West African species, the shortfall from Ghana led to increased purchases of both sawn lumber and logs from Liberia. Zaire, too, recorded an impressive increase. A well-known German timber company has established a sawmill near Kinshasa which may have been responsible for a proportion of the increase in supplies.

With its mining industry now in trouble, Zaire may turn more to timber to earn foreign currency. It has good supplies of many of the prominent West African species like afrosoria, mahogany, sapelo, iroko and agba. There are problems of infrastructure, however, and it will not be easy to attract foreign capital to the country for the establishment of sawmills.

Romania and Yugoslavia is well ahead of all other species of sawn hardwood imported into Britain, accounting for more than 22 per cent of the total.

The answer lies in the fundamental factors of quality and price. The timber industry seems to prefer the quality of the imported wood and Britain's woodland owners place rather too high a value on their logs.

Malaysia maintained its position as Britain's largest supplier of sawn lumber. Indonesia improved its position, but Singapore fell away. There was a significant increase in supplies of sawn lumber from Papua New Guinea, which is known to be keen to exploit further its hardwood resources.

The Far East, however, was not without its problems for the trade. The Government of Thailand—one of the three main sources of teak—banned exports of both logs and sawn wood. So far, because of reduced world demand, supplies from Burma and Indonesia and through the trade from Hong Kong have been sufficient to make good the shortfall.

In spite of the trend for producing countries to undertake more of the sawmilling, the UK import of logs continues to account for a little more than 20 per cent of the total import by volume. The output from logs where colour match is important for high-class joinery work and there is still a sizeable veneer-cutting industry in Britain.

Perhaps the most surprising fact emerging from the statistics for anyone outside the timber trade is that beech from Germany, France, Denmark, Romania and Yugoslavia is well ahead of all other species of sawn hardwood imported into Britain, accounting for more than 22 per cent of the total.

The answer lies in the fundamental factors of quality and price. The timber industry seems to prefer the quality of the imported wood and Britain's woodland owners place rather too high a value on their logs.

## Tapioca tax urged

PARIS, June 13

THE EEC should impose a tax on imports of tapioca from Thailand, according to Philippe Neeser, chairman of the French wheat producers.

He told a Press conference here that imports had grown to 4.3m tonnes this year, compared with 800,000 tonnes five or six years ago.

That tapioca could be taxed at a preferential rate on entry and the revenues sent to Thailand to help develop farm output, he suggested.

In Bangkok, meanwhile, the Thai Board of Trade said tapioca product exports were expected

to rise to 4.9m tonnes, valued at \$437.5m this year, compared with 3.9m tonnes worth \$384.7m last year.

The Board's weekly bulletin noted that during the first five months of this year exports of tapioca pellets—the most important tapioca product—increased to 2.3m tonnes from 1.7m in the same period last year.

Efforts by the Thai Government and the private sector to expand the market for tapioca products included an offer to sell 200,000 tonnes of tapioca flour to China.

These would make each country rethink its fishing strategy.

COMMODITY MARKET REPORTS AND PRICES

BASE METALS			
Copper	3.50	3.50	3.50
Aluminium	1.20	1.20	1.20
Zinc	0.80	0.80	0.80
Nickel	1.50	1.50	1.50
Lead	0.60	0.60	0.60
Steel	0.40	0.40	0.40
Iron	0.30	0.30	0.30
Coal	0.20	0.20	0.20
Oil	0.10	0.10	0.10
Gas	0.05	0.05	0.05
Electricity	0.02	0.02	0.02
Wheat	0.15	0.15	0.15
Barley	0.10	0.10	0.10
Oats	0.08	0.08	0.08
Rye	0.07	0.07	0.07
Millet	0.06	0.06	0.06
Sorghum	0.05	0.05	0.05
Maize	0.04	0.04	0.04
Beans	0.03	0.03	0.03
Lentils	0.02	0.02	0.02
Peas	0.01	0.01	0.01
Flour	0.00	0.00	0.00
Sugar	0.00	0.00	0.00
Coffee	0.00	0.00	0.00
Tea	0.00	0.00	0.00
Cocoa	0.00	0.00	0.00
Rubber	0.00	0.00	0.00
Latex	0.00	0.00	0.00
Gold	0.00	0.00	0.00
Silver	0.00	0.00	0.00
Palladium	0.00	0.00	0.00
Platinum	0.00	0.00	0.00
Iron Ore	0.00	0.00	0.00
Copper Ore	0.00	0.00	0.00
Aluminium Ore	0.00	0.00	0.00
Zinc Ore	0.00	0.00	0.00
Nickel Ore	0.00	0.00	0.00
Lead Ore	0.00	0.00	0.00
Steel Scrap	0.00	0.00	0.00
Iron Scrap	0.00	0.00	0.00
Coal	0.00	0.00	0.00
Oil	0.00	0.00	0.00
Gas	0.00	0.00	0.00
Electricity	0.00	0.00	0.00
Wheat	0.00	0.00	0.00
Barley	0.00	0.00	0.00
Oats	0.00	0.00	0.00
Rye	0.00	0.00	0.00
Millet	0.00	0.00	0.00
Sorghum	0.00	0.00	0.00
Maize	0.00	0.00	0.00
Beans	0.00	0.00	0.00
Lentils	0.00	0.00	0.00
Peas	0.00	0.00	0.00
Flour	0.00	0.00	0.00
Sugar	0.00	0.00	0.00
Coffee	0.00	0.00	0.00
Tea	0.00	0.00	0.00
Cocoa	0.00	0.00	0.00
Rubber	0.00	0.00	0.00
Latex	0.00	0.00	0.00
Gold	0.00	0.00	0.00
Silver	0.00	0.00	0.00
Palladium	0.00	0.00	0.00
Platinum	0.00	0.00	0.00
Iron Ore	0.00	0.00	0.00
Copper Ore	0.00	0.00	0.00
Aluminium Ore	0.00	0.00	0.00
Zinc Ore	0.00	0.00	0.00
Nickel Ore	0.00	0.00	0.00
Lead Ore	0.00	0.00	0.00
Steel Scrap	0.00	0.00	0.00
Iron Scrap	0.00	0.00	0.00
Coal	0.00	0.00	0.00
Oil	0.00	0.00	0.00
Gas	0.00	0.00	0.00
Electricity	0.00	0.00	0.00
Wheat	0.00	0.00	0.00
Barley	0.00	0.00	0.00
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Rye	0.00	0.00	0.00
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Sorghum	0.00	0.00	0.00
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Flour	0.00	0.00	0.00
Sugar	0.00	0.00	0.00
Coffee	0.00	0.00	0.00
Tea	0.00	0.00	0.00
Cocoa	0.00	0.00	0.00
Rubber	0.00	0.00	0.00
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Gold	0.00	0.00	0.00
Silver	0.00	0.00	0.00
Palladium	0.00	0.00	0.00
Platinum	0.00	0.00	0.00
Iron Ore	0.00	0.00	0.00
Copper Ore	0.00	0.00	0.00
Aluminium Ore	0.00	0.00	0.00
Zinc Ore	0.00	0.00	0.00
Nickel Ore	0.00	0.00	0.00
Lead Ore	0.00	0.00	0.00
Steel Scrap	0.00	0.00	0.00
Iron Scrap	0.00	0.00	0.00
Coal	0.00	0.00	0.00
Oil	0.00	0.00	0.00
Gas	0.00	0.00	0.00
Electricity	0.00	0.00	0.00
Wheat	0.00	0.00	0.00
Barley	0.00	0.00	0.00
Oats	0.00	0.00	0.00
Rye	0.00	0.00	0.00
Millet	0.00	0.00	0.00
Sorghum	0.00	0.00	0.00
Maize	0.00	0.00	0.00
Beans	0.00	0.00	0.00
Lentils	0.00	0.00	0.00
Peas	0.00	0.00	0.00
Flour	0.00	0.00	0.00
Sugar	0.00	0.00	0.00
Coffee	0.00	0.00	0.00
Tea	0.00	0.00	0.00
Cocoa	0.00	0.00	0.00
Rubber	0.00	0.00	0.00
Latex	0.00	0.00	0.00
Gold	0.00	0.00	0.00
Silver	0.00	0.00	0.00
Palladium	0.00	0.00	0.00
Platinum	0.00	0.00	0.00
Iron Ore	0.00	0.00	0.00
Copper Ore	0.00	0.00	0.00
Aluminium Ore	0.00	0.00	0.00
Zinc Ore	0.00	0.00	0.00
Nickel Ore	0.00	0.00	0.00







INSURANCE, PROPERTY, BONDS AUTHORIZED UNIT TRUSTS OFFSHORE AND OVERSEAS FUNDS

Table with multiple columns listing various financial products, their managers, and performance metrics. Includes sections for Insurance, Property, Bonds, Authorized Unit Trusts, and Offshore/Overseas Funds.

BUILDING SOCIETY INTEREST RATES

Table showing interest rates for various building societies, categorized by type of account and term.

Base Rate Change BANK OF BARODA Bank of Baroda announce that, for balances in their books on and after 13th June, 1978, and until further notice their Base Rate for lending is 10% per annum. The deposit rate on all monies subject to seven days notice of withdrawal is 6% per annum.

NOTES Prices do not include 15p stamp, except where indicated, and are in pence unless otherwise indicated. Includes sections for CLIVE INVESTMENTS LIMITED, CORAL INDEX, and INSURANCE BASE RATES.







**FINANCE, LAND—Continued**[illegible]

36	Debenhams	15	Midland Bank	25	Town & City	40
36	Dunlop	7	N.E.T.	22	Unilever	40
36	Electric Star	17	Overseas	22	Woolworth	40
36	Emmott	14	Overseas	22	Woolworth	40
36	Gen. Accident	17	P & O Ind.	8	British Petroleum	40
36	Gen. Electric	18	P & O Ind.	8	Burnham Oil	40
36	Globe	19	Recesses	8	British Petroleum	40
36	Grain Tr.	9	Rank Org. A.	8	Shell	40
36	G.U.S.A.	20	Reed Int'l.	12	Shell	40
36	Guardian	22	Reed Int'l.	12	Shell	40
36	Harley	22	Tesco	4	Shell	40
36	Haverhill	20	Thorn	22	Shires	40
36	House of Fraser	22	Trust Houses	22	Chatter Cons.	40
36				22	Cole's Food	40
36				22	Cons. T. Zinc	40

\* Selection of Options traded is given on the London Stock Exchange Report page.



Inflation 'could delay economic recovery'

BY PETER RIDDLELL, ECONOMICS CORRESPONDENT

A STERN warning about the risks of a rekindling of inflation, even in countries where present rates of price increase are low, was given yesterday by Mr. Gordon Richardson, Governor of the Bank of England.

In a major speech on the international economic prospects, Mr. Richardson identified inflation as a lion in the path of economic recovery.

He rejected the over-simple view that expansion and price stability were alternatives and argued in favour of policies contributing to "some reasonable rate of real growth."

He suggested in Monday's annual report from the Bank for International Settlements.

Mr. Richardson's speech highlights the advice which the Bank of England has been giving within the UK.

Expansionary monetary policies and large increases in public expenditure were both described as likely to be inappropriate.

"On the other hand, judicious tax reductions may foster sustainable expansion while, at the same time, through the increases in real income produced, below the moderate pressure for higher wage settlements."

Mr. Richardson, who was speaking in Bern yesterday at the annual meeting of the Association of Foreign Banks, claimed that the UK was attempting to follow a policy involving "some inflation, the recession, and expansion through tax cuts, but tending towards a balance of payments and on no greater scale than can be

Zaire accepts Western plan to curb imports

BY GUY DE JONQUIERES, COMMON MARKET CORRESPONDENT

BRUSSELS, June 13.

Zaire today agreed, under pressure from its principal Western creditors, to impose a strict new import licensing system and place its public finances under the supervision of outside experts as a first step towards re-ordering its troubled economy.

The measures were endorsed on the first day of a two-day meeting here between Zaire and almost a dozen other governments to discuss the country's mounting difficulty in servicing its external debt, estimated at about \$2.3bn.

The talks sponsored by Belgium also include officials from the International Monetary Fund, the World Bank and the EEC Commission.

Officially, the proposal to impose tighter controls over the running of the Zaire economy is being attributed to the regime of President Mobutu Sese Seko. But other governments have made it clear that they are unwilling to give any further aid unless they receive firm assurances that it will be properly spent.

Zaire is in the midst of negotiating a credit arrangement with the IMF which is expected to form the backbone of a new aid package.

Its Government is also seeking emergency aid to restore the economy caused by the recent invasion of Shaba province, as well as substantial new foreign investment.

It has asked for new long-term investment from external sources of about \$1bn (\$344m), half of it for the transport sector and the remainder is required for agriculture, energy, education, telecommunications and mining.

It has been agreed that an IMF nominee, assisted by a staff of about six outside experts will take over as principal sector of the Zaire Central Bank from mid-August. He will have wide authority over the operation of the country's credit and payments mechanisms.

Zaire has also consented to the appointment of another outside official as principal controller of its finance ministry, with special responsibility for public spending, budgetary receipts and the running of public sector enterprises.

It is not yet known whether he will be supplied by the IMF or from one of the creditor governments.

The import licensing scheme, which is expected to take effect as soon as possible, is considered a vital step towards staunching the heavy drain on the country's depleted foreign exchange reserves, and ensuring that future imports are economically justified.

Zaire's creditors consider it equally important that management of the country's internal financial affairs should ensure that money is spent on the purposes for which it is officially intended, and not misused for private gain, as has often been the case in the past.

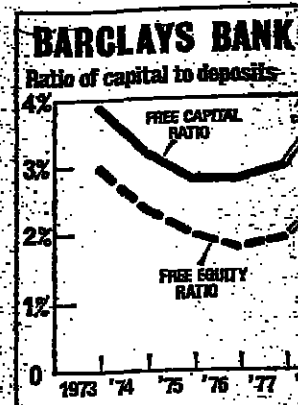
Zaire has presented its creditors with a four-point programme for stabilising its economy and increasing production, particularly in the mining sector which has been badly affected by the recent fighting in Shaba. Belgium believes that the country should aim at restoring output to 1973 levels.

The other governments represented at today's meeting were U.S., Britain, France, West Germany, Italy, the Netherlands, Japan, Canada and Iran. Saudi Arabia has been invited to the meeting but did not send a representative today.

Castro blames Brzezinski, Page 4

The hidden cost for Barclays

Index rose 2.4 to 474.6



The full since two major investment trusts were taken over by pension funds last year was broken yesterday when Barclays Bank emerged as the intermediary in an ingenious scheme for the Post Office Staff Superannuation Fund to acquire the Investment Trust Corporation. Barclays, which unlike the fund can issue paper, is making an agreed share exchange offer on the basis of 88 Barclays units for 100 ITC terms, which are worth 255p per ITC share. The overall value placed on the trust, with Barclays at 335p, is around £93m. When the deal goes through the bank will pass on the trust to the Post Office fund for some £85m in cash, or 264p a share—representing a discount of 10 1/2 per cent.

The advantages of this arrangement are, first, that the trust gets an offer which, even on the basis of the 264p a share underwritten cash alternative, comes out slightly above the net asset value. This is stated to be 261p after deducting prior charges at redemption value and taking off 14p a share of contingent capital gains tax. The share offer is in fact currently worth even more than the full going concern value, a price which a pension fund could not possibly afford to pay directly.

Secondly, the pension fund avoids all the publicity and unpleasantness of a contested offer which was endured by the British Rail and Coal Board funds in buying Edinburgh and Funder and British Investment Trust, respectively. It pays hardly more than those institutions, and avoids the risk of being stuck with an awkward minority as the Coal Board fund has been. Moreover it has been able to pore over the portfolio in advance, a privilege not available in a contested situation.

Finally, Barclays has been able to raise a useful sum—enough to improve its capital to deposit ratios by around 0.4 of a percentage point—without launching a conventional rights issue; the move is equivalent to a one-for-seven at around 290p. Apparently the scheme was devised by Samuel Montagu and offered to Barclays several months ago as the first on a list of potential capital raisers. Barclays accepted, reasoning that although the scheme was more hit-or-miss than a rights issue the need for new capital was not urgent and meantime the trust route could produce capital at only about half the discount involved in a rights issue.

At this point, however, the reasoning gets fuzzy. A discount of 10 per cent given away to outsiders is not at all to be compared with even a 20 per cent discount offered to existing shareholders in a rights issue. Quite clearly, the reason why this scheme is attractive to Barclays shareholders—effectively tossing a useful bonus of around £10m into the kitty.

Barclays is also blurring over the purpose of the deal, said to be to raise funds to use in the "further expansion of the business." In the past four years group deposits have declined by 5 per cent, after adjustment for inflation. Shareholders should note the recent evidence of the London Clearing Bankers to the Wilson Committee. They observed: "There is ample evidence... that the banks have had to turn to the capital markets merely to maintain their position in real terms."

Pegler-Hattersley

Serck told the story last month, and now Pegler-Hattersley confirms it: the UK valve industry is having a very rough time. Pegler's profits for the year to April are down from £18.2m to £12.6m pre-tax, the main reason is that the world market in steel valves, which takes nearly a fifth of group sales—has nosedived. Two years ago, Pegler's trading profits amounted to £10.5m, of which something like a third might have come from steel valves. Now trading profits are down to £6.7m, and the returns at 4.8 per cent.

Johnson Matthey

After the record results of 1976-77 Johnson Matthey ended the year to March 1978 with pre-tax profits 10 per cent lower at £18.9m. At first, the group seemed set fair for a good year when it reported 17 per cent growth in first quarter profits, though that was the latest in a series of five quarters of declining profit growth rates. The normally quiet second quarter turned in unchanged figures, but the third, resulted in a 32 per cent decline. At least the fourth quarter is better than this, with profits only 21 per cent lower.

The largest chunk of the firm's profit shortfall can be traced to refining and chemical activities where overcapacity has knocked margins severely. Elsewhere, the contributions from banking, and colours and transfers are slightly up, while profits from the fabrication of precious metals are only maintained because this division incorporates Johnson Matthey and Mallory (previously an associate) as a subsidiary for the first time.

At 428p the shares trade on a p.e. of 8.2 while the yield is 1.5 per cent. The market average is 10.5 and the returns at 4.8 per cent.

Thorn to market Japanese video tape recorders

BY CHARLES SMITH

TOKYO, June 13.

JAPAN VICTOR has reached agreement with the Thorn group to supply 20,000 video tape recorders a year to be marketed by Thorn in the UK under its own brand name.

The agreement includes a clause on the supply of information which will enable Thorn to start assembling recorders below two years and, a later stage, to embark on full-scale manufacture.

The agreement is similar to arrangements made by Victor with European electronics manufacturers, including the French Thomson group.

It is the first phase of the marketing tie-up between a Japanese videorecorder manufacturer and the British company, although Japanese electronics companies—including Sony Victor—are making direct exports of videorecorders to the UK.

Victor was not willing today to speculate on the price at which the Thorn video tape recorders will be sold in Britain, but says that its own sets are being sold at about £750 each.

Victor is aiming for direct export to the British market of 30,000 units a year, in addition to the 20,000 units which will be supplied to Thorn. It expects its total western European sales to reach 110,000 units a year.

The industry generally is expecting prices to fall by perhaps 30 per cent as the volume of sales increases.

Sets adapted

Japan Victor was the pioneer of the video home system of video tape recording, which is in competition with the Beta Format system developed by Sony. Members of the Beta Format group, including Sony itself, are also exporting to Europe, but appear to have made a later start than Victor and, so far, to be shipping smaller quantities of sets.

Both groups had to adapt their sets to receive the PAL system of colour broadcasting used in the UK and West Germany before they could enter the European market.

Japan Victor says that its arrangements for entering the European markets are complete with the signature of the Thorn agreement.

Max Wilkinson writes: The Sony and the Victor systems will be in competition with a third system being marketed by Philips of Holland. The Philips system, which was first in the field, is less economical in the use of tape than its Japanese competitors, but is claimed by Philips to produce a better quality of picture.

Tapes recorded on any of the three systems cannot be played back on rival equipment.

Philips is believed to be talking with Sony and Matsushita about the possibility of standardising designs.

Last Israeli troops pull out of Lebanon

BY DAVID LENNON

South Lebanon, June 13.

ISRAEL TODAY withdrew the last of its troops from Southern Lebanon, three months after they invaded the area in an attempt to smash the Palestinian guerrillas.

The army left, Israel warned that it would continue to "monitor the situation" and to protect the Christian minority against Palestinian attacks.

The Israeli positions within the 10-kilometre-deep belt along the length of the Israeli-Lebanese border were handed over to the Right-wing, mainly Christian, militia. Israel refused to give its positions over to the UN peace-keeping troops, with whom relations appear to be strained.

The normal hand-over ceremony was staged at the Shia Moslem village of Mis el Jebel, close to the Israeli border-town of Niryat Shimon and midway between the two main Christian enclaves in Southern Lebanon.

According to the Security Council resolution establishing the UN Interim Force in Lebanon, all the area occupied by Israel in March should have been taken over by UN troops.

In earlier stages of the withdrawal gave up its positions to the UN troops; but this time it insisted on handing them over to the Christians, who have been backed by Israel during its two-year battle against the Palestinian and Syrian forces.

Major Saad Haddad, the commander of the Christian militia, said that his force was strong enough to control the entire border area.

He said that an agreement had been reached last night with the UN concerning the movement of UNIFIL troops in the area under his control. He would not give any details of the arrangement, but it implied UN recognition of the law-enforcement role of the Christian militia.

Anthony McDermott adds: Whether there has been some agreement between UNIFIL and Major Haddad's militia or not, the latter's forces acting as a surrogate protectors of Israel's interests means that tension in the south is bound to continue.

Unhappy

For example, President Sarkis is keen—with the agreement of President Assad of Syria, whose troops make up all but a fraction of the Arab Deterrent Force in Lebanon—to establish control of the central government through his own small and newly reformed army in the area.

The Palestinians and Left-wing forces continue to be unhappy at the role Major Haddad is playing. As a result all the elements for another outbreak of clashes remain.

In heavy fighting between rival Christian militias in the northern Lebanese town of Ehden about 40 people were killed. Among them were Mr. Tony Frangieh, a deputy and the son of the former Lebanese President Suleiman Frangieh, and his family. The fighting reflects tensions between former members of a Right-wing coalition known as the Lebanese Front.

Leyland pins hopes on incentives plan

BY TERRY DODSWORTH, MOTOR INDUSTRY CORRESPONDENT

PLANS FOR a new productivity incentive scheme at British Leyland are being pushed ahead by Mr. Michael Edwards, the chairman, in an urgent attempt to raise the car division's flagging output levels.

He told shareholders at the annual meeting in London yesterday that an incentive scheme could transform Leyland's "precarious" position. "It is crucial to the survival of the company that a productivity incentive scheme is agreed very quickly for cars as it has been for SF Industries (Leyland's engineering interests) and Leyland Vehicles," he said.

Mr. Edwards' warning comes after a five-month period in which Leyland met its sales and profits targets. But he stressed that the group managed to achieve this performance only because of the March Superdeal sales promotion.

"If we could repeat March in terms of sales and profits we would be out of the woods financially. But the fact that our production levels do not enable us to approach the March volumes."

Although Leyland would give no official figures yesterday, Mr. Edwards went on to admit that the chances of meeting its production target of 518,000 cars this year looked slim. "I believe that output is running at about 75 per cent of what the company is aiming for, following some improvement at the beginning of this year."

Leyland's first attempt at a productivity scheme for the cars division was thrown out after a ballot of the workforce two months ago. While management wanted a centralised system giving control over total earnings, the trade unions were pressing for payments closely related to individual efforts.

The company is expected to put forward proposals for its revised scheme next week. This is also likely to retain a large standard element of payment related to the present measured day-work system, but will reflect Mr. Edwards' belief in the power of incentives.

Mr. Edwards warned that a major confrontation with the unions at the present time could "break the back of the company."

Appalling

Last year had been the worst for man-hour and production losses since records began. The company lost 3.7m man-hours due to internal strike action, which led to 11m man-hours of production losses through other workers being laid off, while another 3.3m man-hours were lost through disputes at suppliers.

The position was "so appalling" that everyone must be aware that the company could not survive another year like 1977.

Yesterday's meeting, attended by about 120 shareholders, was markedly less acrimonious than most of the stormy encounters of recent years. The only issue taken up in any force was the proposal to change the name of the group to BL Ltd, which one shareholder said belittled the name of Britain. But the motion was eventually carried.

Production of Rover saloons, Range Rovers and Land Rovers was halted at the Solihull, Birmingham plant yesterday, following a strike by 80 external drivers.

The men walked out after a shop steward was sacked. Half the 6,000 assembly workers have been laid off.

At the Longbridge plant, Birmingham, about 180 men picketed the factory gates in an unofficial protest at loss of earnings caused by unofficial strikes within the plant and among outside suppliers.

A steward said: "This is the only way we can get management and the works committee to take any notice of us. If we carry on picketing we will stop the factory."

Toolroom dispute, Page 8

Commission to study prices of car spares

By Elinor Goodman, Consumer Affairs Correspondent

THE PRICE COMMISSION will examine the prices of spare parts for cars. The reference was one of three announced by Mr. Roy Hattersley, the Prices Secretary yesterday.

The investigation will cover all the companies in the industry, including the car makers. It could result in long-term recommendations about prices.

The reference seems to have been prompted by complaints about the high prices charged for spares and the differences between the prices paid by vehicle manufacturers and those paid by motorists.

Margins are traditionally high on spares despite the increasing competition between motor manufacturers and the specialist component manufacturers. Leyland's component division is one of the car company's divisions which consistently makes money.

The commission has also been asked to look at the prices of portable power tools, of the kind made by such companies as Black and Decker, and the distribution of jeans.

Capital gains tax talks

By Ivor Owen, Parliamentary Staff

MR. JOEL BARNETT, Chief Secretary to the Treasury, is to have consultations with Tory MPs and their tax legislation advisers as part of a general review of capital gains tax procedures.

He announced his willingness to go beyond the normal consultative process last night, during further debate on the Finance Bill, in a House of Commons standing committee. He emphasised that he was not making any advance commitment to amend the Bill.

Continued from Page 1

ICI warning

dozen people starting in January this year. By that time, says the company, it had lost far more artificers.

The company says that union demand for higher pay for these grades of normal workers cannot be met because pay and conditions for weekly staff are governed by national agreements involving a number of signatory unions and it has made the maximum wage offer within pay guidelines.

All the company's manual workers have been made a 10 per cent offer, together with a continuation of the existing productivity scheme in a deal due to run from the beginning of this month.

ICI has offered job restructuring which would include some upgrading of atters, electricians and artificers but the unions rejected this.

Continued from Page 1

Post Office pension fund

under pressure to raise new capital but the approach by the pension fund had offered a vice-chairman of Barclays, said beneficial way of bringing in new funds.

The effect will be that the bank will issue new shares at a discount of only 10.5 per cent from their current market value.

When Midland Bank made its 1976 rights issue earlier this year, the shares were issued at payment of 60.5p a share and a price nearly 17 per cent below final of not less than 7.2068p.

Weather

UK TODAY

MOSTLY dry, but showers in the E.

London, S. N. England, Midlands, S. Wales, Channel

Dry, sunny intervals. Max. 17-19C (63-66F).

E. Anglia, E. N.E. England

Cloudy scattered showers. Max. 15C (59F).

N. Wales, N.W. England, Lakes, I. of Man

Dry, sunny. Max. 17-19C (63-66F).

Borders, Edinburgh, Dundee, Aberdeen, Glasgow, Argyll, Moray Firth, Cent. Highlands, W. N. Scotland, Orkney, Shetland

Dry, sunny intervals. Max. 13-16C (55-61F).

Pollen count: 25, low.

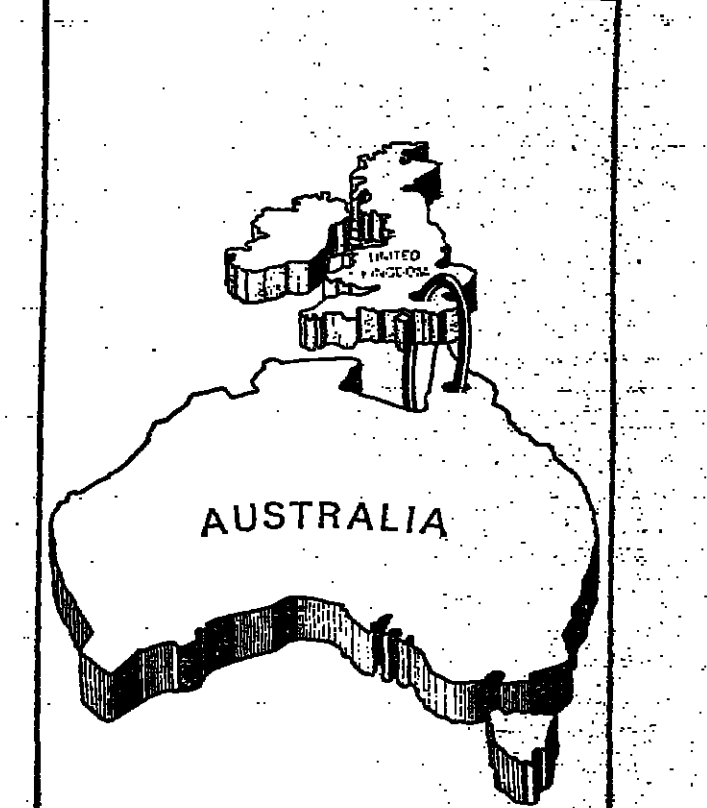
Outlook: Sunny periods, thundery showers.

BUSINESS CENTRES

podria.	°C	°F	75	79	Madrid	°C	°F	13	55
Amman	S	32	90	98	Manchestr.	C	F	11	52
Athens	S	32	90	98	Moscow	C	F	11	52
Bahrain	S	32	90	98	Munich	C	F	11	52
Barcelona	S	32	90	98	Nairobi	C	F	11	52
Belfast	S	32	90	98	Paris	C	F	11	52
Bombay	S	32	90	98	Rome	C	F	11	52
Buenos Aires	S	32	90	98	Stockholm	C	F	11	52
Cairo	S	32	90	98	Tokyo	C	F	11	52
Calcutta	S	32	90	98	Winnipeg	C	F	11	52
Colon	S	32	90	98	Zurich	C	F	11	52
Hong Kong	S	32	90	98					
London	S	32	90	98					
Manila	S	32	90	98					
Mexico	S	32	90	98					
Moscow	S	32	90	98					
Munich	S	32	90	98					
Nairobi	S	32	90	98					
Paris	S	32	90	98					
Rome	S	32	90	98					
Stockholm	S	32	90	98					
Tokyo	S	32	90	98					
Winnipeg	S	32	90	98					
Zurich	S	32	90	98					

HOLIDAY RESORTS

City	Y'day	Today	City	Y'day	Today
Alex	P 22	23	Istanbul	P 30	36
Amman	P 22	23	Jersey	P 31	35
Athens	S 21	20	Las Vegas	P 31	30
Bahrain	S 21	20	London	P 31	30
Barcelona	S 21	20	Luxembourg	C 33	73
Belfast	S 21	20	Madrid	S 40	104
Bombay	C 22	24	Manjara	S 40	76
Colon	C 22	24	Moscow	S 40	76
Hong Kong	P 22	16	Munich	F 28	28
London	C 26	78	Nairobi	S 18	66
Manila	C 24	73	Nice	S 23	73
Manila	C 24	73	Osaka	S 23	73
Medan	C 25	73	Saltburg	C 18	54
Montevideo	S 20	68	Tamper	C 21	76
Shanghai	S 21	78	Tyveride	C 16	61
Shanghai	C 16	61	Vienna	P 17	63
Stock	F 13	23	Venice	R 17	63
Taipei	S 13	23			
Yokohama	S 13	23			
Sunny - Fair - Fair - Rain -					
Sunny - Thunder					



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